Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

Draft

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**Dow Corning Corporation**
Mailing Address:	**P.O. Box 310, Carrolton, Kentucky 41008**
Source Name:	**Dow Corning Corporation**
Mailing Address:	**P.O. Box 310** **Carrolton, Kentucky 41008**
Source Location:	**4770 US 42E, Carrolton, KY 41008**
Permit ID:	**V-07-005**
Agency Interest #:	**703**
Activity ID:	**APE20040003**
Review Type:	**Title V, Operating**
Source ID:	**21-041-00004**
Regional Office:	**Florence Regional Office** **8020 Veterans Memorial Drive, Suite 110** **Florence, KY 41042** **(859) 525-4923**
County:	**Carroll**
Application Complete Date:	**July 6, 2004**
Issuance Date:	
Revision Date:	
Expiration Date:	

John S. Lyons, Director
Division for Air Quality

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Permit	Permit type	Log # or Activity#	Complete Date	Issuance Date	Summary of Action
V-99-050	Initial Issuance	E805	10/5/00	11/1/99	
V-07-005	Renewal	APE20040003	7/6/04	TBD	Several minor changes from various applications (2002- 2007)

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS:

Emission point ID	Boiler ID	Make/Model	Date of construction	Maximum Rated Capacity (Fuels used)/ Controls
U.01	703	Zurn Eric City, #22M Keystone Model SAOH-MJ-DAR-36. Includes the 717 BFW Economizer added in 2005.	1987	175.2 mmBtu/hr (Natural Gas) 167.1 mmBtu/hr (Fuel Oil #2) Controls: None
U.02	766	Zurn Package Water Tube Boiler	11/01/90	97.0 mmBtu/hr (Natural Gas) 97.0 mmBtu/hr (Fuel Oil #2) Controls: None
U.11	767	Nebraska Model NSX-G-117	12/01/97	179.25 mmBtu/hr (Natural Gas) 179.25 mmBtu//hr (Fuel Oil #2) Controls: None
U.15	657	Nebraska, Model NS-E-54 Low NOx burn and flue gas recirculation	1996	75 mmBtu/hr (Natural Gas) Controls: None
U.20	500	Babcock and Wilcox FM 120-97 w/FGR.	2007	180 mmBtu/hr (Natural Gas) Controls: None

APPLICABLE REGULATIONS:

For the 703 Boiler:

i. 401 KAR 51:017 (40 CFR 52.21) applies to the particulate, sulfur dioxide, nitrogen oxide and visible emissions.

ii. 401 KAR 59:015 applies to the particulate, sulfur dioxide and visible emissions but all standards under this regulation are superseded by the equal or more stringent standards under 51:017.

For the 766 and 657 Boilers:

i. 401 KAR 51:017 (40 CFR 52.21) applies to the particulate, sulfur dioxide, nitrogen oxide and visible emissions.

ii. 40 CFR 60 Subpart Dc (incorporated by reference in 401 KAR 60:005) applies to the particulate and sulfur dioxide emissions.

iii. 401 KAR 59:015 applies to the particulate, sulfur dioxide and visible emissions but all standards under this regulation are superseded by the equal or more stringent standards under 51:017.

For the 767 and 500 Boilers:

i. 40 CFR 60 Subpart Db (incorporated by reference in 401 KAR 60:005) applies to the sulfur dioxide, nitrogen oxides, and visible emissions.

ii. 401 KAR 59:015 applies to the particulate, sulfur dioxide and visible emissions.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

1. Operating Limitations:

For the 703 Boiler:

a. The maximum rated heat input while firing natural gas shall not exceed 175.2 mmBtu/hr (Permit C-87-059: PSD limit).

For the 766 Boiler:

b. The maximum rated heat input shall not exceed 97.0 mmBtu/hr (Permit C-90-157: PSD Limit).

For the 767 Boiler:

c. The fuel oil #2 usage rate shall not exceed 550 hours per year [12-month rolling period] (Permit V-99-050: Limit taken to qualify for alternate opacity monitoring procedures and waiver of COM requirements).

Compliance Demonstration Methods:

a. The permittee shall keep records of the maximum rated heat input of the 703 Boiler.
b. The permittee shall keep records of the maximum rated heat input of the 766 Boiler.
c. The permittee shall keep monthly records of the total number of hours of fuel oil #2 usage and the 12-month rolling total of hours of fuel oil #2 usage in the 767 Boiler.

2. Emission Limitations:

a. For the 703 Boiler, pursuant to 401 KAR 59:015 BACT limits:
   (1) For natural gas combustion:
      (i) Emissions of particulate matter shall not exceed 0.1 lb/mmBtu.
      (ii) Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBtu.
      (iii) Emissions of nitrogen oxides shall not exceed 0.2 lb/mmBtu.
      (iv) The opacity of visible emissions shall not exceed 20%.
   (2) For fuel oil #2 combustion:
      (i) Emissions of particulate matter shall not exceed 0.1 lb/mmBtu.
      (ii) Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBtu.
      (iii) The sulfur content of the fuel oils shall not exceed 0.75 percent by weight.
      (iv) Emissions of nitrogen oxides shall not exceed 0.4 lb/mmBtu.
      (v) The opacity of visible emissions shall not exceed 20%.
b. For the 766 Boiler, pursuant to 401 KAR 51:017 BACT limits:
   (1) For natural gas combustion:
      (i) Emissions of particulate matter shall not exceed 0.015 lb/mmBtu.
      (ii) Emissions of sulfur dioxide shall not exceed 0.5 lb/mmBtu.
      (iii) Emissions of nitrogen oxides shall not exceed 0.1 lb/mmBtu.
      (iv) The opacity of visible emission shall not exceed 20%.
   (2) For fuel oil #2 combustion:
      (i) Emissions of particulate matter shall not exceed 0.015 lb/mmBtu.
      (ii) Emissions of sulfur dioxide shall not exceed 0.5 lb/mmBtu; or pursuant to 40 CFR 60.42c (d), the sulfur content of the oil shall not exceed 0.5 percent by weight.
      (iii) Emissions of nitrogen oxides shall not exceed 0.2 lb/mmBtu.
      (iv) The opacity of visible emissions shall not exceed 20%.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

2. Emission Limitations:

c. For the 500 Boiler, pursuant to 401 KAR 60:005 (3)c, (40 CFR 60 Subpart Db) for natural gas combustion:
   (1) Emissions of particulate matter shall not exceed 0.1 lb/mmBtu.
   (2) Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBtu.
   (3) Emissions of nitrogen oxides shall not exceed 0.2 lb/mmBtu.
   (4) The opacity of visible emissions shall not exceed 20%.

d. For the 657 Boiler, pursuant to 401 KAR 60:005 (3)c, (40 CFR 60 Subpart Db)**:**
   (1) Emissions of particulate matter shall not exceed 0.1 lb/mmBtu.
   (2) Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBtu.
   (3) Emissions of nitrogen oxides shall not exceed 0.2 lb/mmBtu.
   (4) The opacity of visible emissions shall not exceed 20%.

e. For the 767 Boiler, pursuant to 401 KAR 60:005 (3)c, (40 CFR 60 Subpart Db)**:**
   (1) For natural gas combustion:
      (i) Emissions of nitrogen oxides shall not exceed 0.20 lb/mmBtu (30-day rolling average) [40 CFR 60.44b (a) [incorporated by reference in 401 KAR 60:005]].
      (ii) Emission of particulate matter shall not exceed 0.1 lb/mmBtu [401 KAR 59:015, Section 4 (1)(b)].
      (iii) Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBtu [401 KAR 59:015, Section 5 (1)(b)].
      (iv) The opacity of visible emission shall not exceed 20% [401 KAR 59:015, Section 4 (2)].
   (2) For fuel oil #2 combustion:
      (i) Emissions of nitrogen oxides shall not exceed 0.30 lb/mmBtu (30-day rolling average) [40 CFR 60.44b (a) [incorporated by reference in 401 KAR 60:005]].
      (ii) Emissions of particulate matter shall not exceed 0.10 lb/mmBtu [401 KAR 59:015, Section 4 (1)(b)].
      (iii) Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBtu [40 CFR 60.42b(a)] and the sulfur content of the fuel oil shall not exceed 0.5 percent by weight [40 CFR 60.42b (j)].
      (iv) The opacity of visible emissions shall not exceed 20% (6-minute average) except for one 6-minute period per hour of not more than 27% [40 CFR 60.43b (f)].
   (3) For natural gas and fuel oil #2 combined, emissions of nitrogen dioxides shall not exceed 39.5 tons per year (12-month rolling total).

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) UTILITIES - BOILERS: (Continued)

Compliance Demonstration Methods:

a. For sulfur lbs/mmBtu emission limits:
The permittee shall demonstrate compliance with the sulfur content limits through either:
(i) Fuel oil sampling - the oil in each fuel oil tank shall be sampled after each new shipment of oil is received as described in 40 CFR 60.46c (d)(2); or
(ii) Fuel oil supplier certification - the permittee shall maintain fuel oil receipts as specified in 40 CFR 60.49b (r).

b. For the nitrogen oxides, particulate matter and sulfur dioxide lbs/mmBtu emission limits:
(1) Compliance with emission limits (except the nitrogen oxide limits on the 767 and 500 boilers) shall be demonstrated through the following: for each boiler, burning only natural gas or fuel oil # 2 shall be deemed to be compliance with the NOx, PM, and So2 limits, based on existing testing results and emissions factors.
(2) For compliance with the nitrogen oxides standards and annual emission limits for the 767 boiler (U.11), see **Section 4. Specific Monitoring Requirements.**

c. For visible emissions:
(i) For each boiler, compliance is demonstrated while natural gas is burned.
(ii) When burning fuel oil # 2, refer to Subsection **Section 4. Specific Monitoring Requirements** for compliance with the opacity limits.

3. Specific Testing Requirements:

a. For the 767 Boiler, the permittee shall demonstrate compliance with the sulfur dioxide emission limits for fuel oil #2 combustion through fuel supplier certification of the fuel sulfur content.

b. If fuel oil sampling is performed, the sampling shall be performed in accordance with the procedures described in 40 CFR 60.46c (d)(2).

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information:
(1) The monthly (calendar month) fuel usage rate (cubic feet/month or gallons/ month) of each of the fuels (natural gas, fuel oils #2) listed previously for each boiler.
(2) The sulfur content of each type of fuel oil burned.

b. For the 767 and 500 Boilers, the permittee shall:
(1) Install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions in accordance with the procedures described in 40 CFR 60.48b (b), (c), (d), (e), and (f); or
(2) [40 CFR 60.48b (g)(2)] - Monitor boiler operating conditions and predict nitrogen oxides emissions as specified in a plan submitted pursuant to 40 CFR 60.49b (c).

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) UTILITIES - BOILERS: (Continued)

c. The 767 boiler is subject to 40 CFR 60 Subpart Db and is permitted to burn fuel oil #2 for up to 550 hours per year. 40 CFR 60.48b (b) requires installation of a continuous opacity monitoring system (COM) on this boiler. However, the permittee has been approved to use the alternative opacity monitoring procedures specified below. The specified procedures are valid only during operation of the boiler on fuel oil #2 and may not be used if any other liquid or solid fuels are burned in the boiler.
   (1) At least once every four hours during daylight shifts when oil is combusted, an observer certified in accordance with Method 9 shall perform 6-minute visible emission observations.
   (2) If the average opacity for a 6-minute set of readings, made in accordance with Condition (1) above, exceeds 10 percent, the observer shall collect two additional 6-minute sets of visible emission readings for a total of three data sets.
   (3) Records of the date and time of visible emission observations, along with the results of each observation, must be maintained.

d. If fuel oil # 2 is burned in the 703 or 766 boilers, then the permittee shall perform a qualitative visual observation of the opacity of emissions from each stack at least once per week. If visible emissions are seen, the permittee shall perform an EPA Reference Method 9 test for opacity on the applicable stack emission within 24 hours of observing visible emissions, and make any necessary repairs if the opacity exceeds the allowable limit.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. The maximum design heat input capacity of each of the boilers.
b. The monthly fuel usage rate of each fuel at each boiler.
c. The total amount of every fuel used at each boiler for every consecutive 12-month period.
d. The sulfur content of each type of fuel oil used. If fuel oil supplier certification is used to demonstrate compliance with the sulfur content limits, the records shall contain the following information:
   i. The name of the oil supplier;
   ii. A statement from the oil supplier certifying the sulfur content of the oil.
e. Results of the latest performance tests conducted at each boiler.
f. For the 767 Boiler, the permittee shall maintain the records required by:
   40 CFR 60.49b (d); and
   40 CFR 60.49b (g) for each steam generating unit operating day.
g. For the 767 Boiler, during periods of fuel oil #2 operation, the permittee shall maintain the following records:
   (1) Date and time of the required visible emission observations, along with the results of each observation.
   (2) The permittee shall record the hours of operation for which fuel oil #2 was burned each calendar quarter and include this information in the required excess emission reports.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) UTILITIES - BOILERS: (Continued)

6. Specific Reporting Requirements:

a. For the 767 and 500 Boilers, the permittee shall submit to the Division the following information:

40 CFR 60.49b (h)	Excess emission reports
40 CFR 60.49b (i)	Quarterly reports of the information recorded under 40 CFR 60.49b (g)

b. Thirty days after the end of each calendar quarter, in which there are opacity excess emissions during fuel oil #2 combustion, the permittee shall submit an excess emission report (EER) to the Division. If there are no opacity excess emissions during a calendar quarter, EERs maybe submitted on a semiannual basis. For reporting purposes, excess emissions are defined as any 6-minute period during which the average opacity exceeds 20 percent, and EERs must indicate the total time of the visible emission observations during a calendar quarter and identify the duration of any excess emissions.

c. VOC emissions from the boilers shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(2) UTILITIES - FURNACES:

Emission point ID	Furnace ID	Make/Model	Date of construction	Maximum Rated Capacity (Fuels used)/ Controls
A2.01	3600	Struthers-Wells, Corp. Model 9CV 27-6 Dowtherm A Vaporizer	1986	19.7 mmBtu/hr (Natural Gas fired only)
A10.01	5250	Struthers-Wells, Corp. Syltherm Vaporizer	1988	25.9 mmBtu/hr (Natural Gas fired only)

APPLICABLE REGULATIONS:
401 KAR 59:015 applies to the particulate, sulfur dioxide and visible emissions.

1. Operating Limitations: None

2. Emission Limitations:

a. For the 3600 furnace, pursuant to 401 KAR 59:015, Sections 4 &5:
(1) Emissions of particulate matter shall not exceed 0.48 lb/mmBtu.
(2) Emissions of sulfur dioxide shall not exceed 2.27 lb/mmBtu.
(3) The opacity of visible emissions shall not exceed 20 percent.

b. For the 5250 furnace, pursuant to 401 KAR 59:015, Sections 4 &5:
(1) Emissions of particulate matter shall not exceed 0.27 lb/mmBtu.
(2) Emissions of sulfur dioxide shall not exceed 0.84 lb/mmBtu.
(3) The opacity of visible emissions shall not exceed 20 percent.

Compliance Demonstration Methods:
For each furnace, burning only the fuel specified in this permit (natural gas) shall be deemed to be compliance with the applicable particulate matter, sulfuric dioxide, and opacity limits.

3. Testing Requirements:
Pursuant to 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:
None

5. Specific Recordkeeping Requirements:
The permittee shall maintain the records of the monthly fuel usage rate of natural gas at each furnace.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(2) UTILITIES - FURNACES: (Continued)

6. Specific Reporting Requirements:
VOC emissions from the furnaces shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) STORAGE TANKS - CATEGORY 1:

Dow Vent ID	Tank ID	Capacity (gallons)	Type
1505	1505*	20,000	Horizontal Pressure Vessel
1506	1506*	20,000	Horizontal Pressure Vessel
1507	1507*	20,000	Horizontal Pressure Vessel
C2.09	1542*	20,000	Horizontal Pressure Vessel
C2.10	1543	20,000	Horizontal Pressure Vessel
5146	5146	16,500	Horizontal Pressure Vessel
U.06	785*	100,000	Horizontal Pressure Vessel

* See also Storage Tanks - Category 3 for Early Reduction Requirements.

APPLICABLE REGULATIONS:
40 CFR 60 Subpart Kb (incorporated by reference in 401 KAR 60:005) applies to each of the tanks listed above.

1. Operating Limitations: None

2. Emission Limitations: None

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
Pursuant to 40 CFR 60.116b (b), for each of the tanks listed above, the permittee shall keep readily accessible records showing the dimensions of the tank and an analysis showing the capacity of the tank. The records shall be kept for the life of the tank.

6. Specific Reporting Requirements:
VOC emissions shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) STORAGE TANKS - CATEGORY 2:

NOTE: Emissions from these sources are included in KYEIS ID# 82 T-10 Thermal Oxidizer.

Dow Vent ID	Tank ID	Capacity	Type
5900	5900	30000	Horizontal Pressure Vessel
5901	5901	30000	Horizontal Pressure Vessel
5902	5902	30000	Horizontal Pressure Vessel
5903	5903	30000	Horizontal Pressure Vessel
5904	5904	30000	Horizontal Pressure Vessel
5905	5905	30000	Horizontal Pressure Vessel
5906	5906	200000	Sphere
5907	5907	100000	Sphere
883 Quench	954	20,000	Vertical
5908	5908	100000	Sphere
5909	5909	100000	Sphere
5910	5910	60000	Sphere
5956	5956	30000	Horizontal Pressure Vessel
5957	5957	30000	Horizontal Pressure Vessel
5958	5958	30000	Horizontal Pressure Vessel

APPLICABLE REGULATIONS:
401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart Kb, "Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984", applies to each of the tanks listed above.

1. Operating Limitations:
Each of the storage tanks listed above shall be equipped with a closed vent system and control device meeting the requirements of 40 CFR 60.112b(a)(3).

Compliance Demonstration Method:
Each tank shall be in compliance when it is vented to the Vent Header System and control devices as complying with 40 CFR 60.112b (a)(3)(i) and (ii). See the 40 CFR 60 Subpart Kb operating requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System.**

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

Refer to 40 CFR 60 Subpart Kb emissions limitations requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System.**

3. Testing Requirements:

a. Each tank vented to the Vent Header System is exempt from 40 CFR 60.8 of the General Provisions. [40 CFR 60.113b (c)]

b. Refer to 40 CFR 60 Subpart NNN testing requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System.**

4. Specific Monitoring Requirements:

Refer to 40 CFR 60 Subpart NNN monitoring requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System.**

5. Specific Recordkeeping Requirements:

a. The permittee shall keep the following information in readily accessible records for the life of the source: [40 CFR 60.115b (a), Reporting and recordkeeping requirements, 40 CFR 60.116b (a), Monitoring of operations]

(1) The dimension of each tank and an analysis showing the capacity of each tank. [40 CFR 60.116b (b)]

(2) A copy of the Subpart Kb Operating Plan. [40 CFR 60.115b (c)(1)]

b. Refer to 40 CFR 60 Subpart NNN recordkeeping requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System.**

6. Specific Reporting Requirements:

a. The permittee shall submit an Operating Plan containing the information listed in **Section B (6), Vent Header System** reporting requirements as an attachment to the notification required by 40 CFR 60.7(a)(1) for approval by the Division. [40 CFR 60.113b(c)(1)] The "Subpart Kb Operating Plan" is the submitted plan unless the plan has been modified by the facility and approved by Division. In this case, the modified plan applies. A new or revised Subpart Kb Operating Plan shall be submitted for any construction, reconstruction or modification of an affected facility or any component of the Vent Header System and control devices that may affect compliance.

b. VOC emissions shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions:

Refer to 40 CFR 60 Subpart Kb requirements for the Vent Header System and control devices in **Section B (6), Vent Header System**.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) STORAGE TANKS - CATEGORY 3:

a. The following tanks also listed in Category 1 or Category 2, are subject to 40 CFR 60 Subpart Kb (incorporated by reference in 401 KAR 60:005) and are also sources of hazardous air pollutants. Therefore, they are subject to 40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) and form part of the permittee's Early Reduction Source. This category only addresses early reductions requirements (see previous Categories for Kb requirements).

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
1505	1505	1506	1506	1507	1507	5146	5146
5900	5900	5901	5901	5902	5902	5903	5903
5904	5904	5905	5905	5906	5906	5907	5907
5908	5908	5909	5909	5910	5910	5956	5956
5957	5957	5958	5958	C2.09	1542	C2.10	1543
883 Quench	954	D10.12	5920	U.06	785		

b. The following tanks are not subject to 40 CFR 60 Subpart Kb (incorporated by reference in 401 KAR 60:005) and would be insignificant activities except that they are sources of hazardous air pollutants. Therefore, they are subject to 40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) and form part of the permittee's Early Reduction Source. This category only addresses early reductions requirements.

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
198	198	1133	1133	1137	1137	1138	1138
3520	3520	1169	1169	1500	1500	1501	1501
1502	1502	1504	1504	1510	1510	1511	1511
1512	1512	1513	1513	1515	1515	1518	1518
1530	1530	1531	1531	1570	1570	1571	1571
1572	1572	3534	3534	D10.03	5915	F15.06	2458
GAS.01	009	GAS.02	010	U.07	3100	U.08	790
U.10	710	W.03	923				

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) STORAGE TANKS - CATEGORY 3: (Continued)

APPLICABLE REGULATIONS:
401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart D, Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants", applies to the emissions of hazardous air pollutants (HAPs) from each of the tanks listed above.

1. Operating Limitations: None

2. Emission Limitations: Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits in **Section B, (20) Group Requirement 3- Early Reductions Requirements.**

Compliance Demonstration Method:
Emissions of all hazardous air pollutants shall be calculated using the current AP-42 emission methodology for storage tanks or Early Reduction calculations.

3. Testing Requirements: None

4. Specific Monitoring Requirements: See **5. Specific Recordkeeping Requirements**.

5. Specific Recordkeeping Requirements:

a. For each of the tanks listed above, the permittee shall keep records of the following information:
   (1) Emissions calculations for all hazardous air pollutants;
   (2) The methods used to determine HAP and weighted HAP emissions.

b. The permittee shall maintain readily accessible records of all parameters needed to calculate emissions from each of the tanks listed above using the latest AP-42 emission calculation methodology for storage tanks or Early Reduction calculations.

c. For tanks which are vented to a common control or recovery device, the permittee may elect to calculate total emissions from the common control or recovery device instead of each individual tank. In those instances, individual tank calculations are not required and the permittee shall maintain records of the calculations and the methods used to determine HAP and weighted HAP emissions.

6. Specific Reporting Requirements:

a. All emissions of hazardous air pollutants shall be included in the permittee's Early Reduction reports as described in **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

b. VOC emissions shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) STORAGE TANKS - CATEGORY 3: (Continued)

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) STORAGE TANKS – CATEGORY 4: HON Group 1 Tanks not requiring Closed Vent System

(D1.03, D1.04 and D10.03)*	1520, 1536, and 5915 Methanol Tanks	External Floating Roof
	Primary Seal:	Mechanical Shoe Seal
	Secondary Seal:	Mechanical Shoe Seal
	Capacity:	1,000,000 gallons 3,786 m^3

* See Storage Tanks - Category 3 for Early Reduction Requirements.

APPLICABLE REGULATIONS:
401 KAR 63:002 (40 CFR 63, F & G) applies to the 1520, 1536, and 5915 Methanol Tanks.

1. Operating Limitations:
Tanks 1520, 1536, and 5915 shall be equipped with an external floating roof [40 CFR 63.119(c)] meeting the following specifications:

40 CFR 63.119b(c)(1)	Primary/secondary seals
40 CFR 63.119b(c)(2)	Roof/rim openings
40 CFR 63.119b(c)(3 & 4)	Operating/filling/emptying requirements

2. Emission Limitations: None

3. Testing Requirements/ Determination of Compliance:
The permittee shall perform the following testing procedures described in 40 CFR 63.120(b):

40 CFR 63.120(b)(1)	Measurement of gap areas and maximum gap widths
40 CFR 63.120(b)(2)	Gap surface area of each gap location
40 CFR 63.120(b)(3 & 4)	Total gap area determination
40 CFR 63.120(b)(5 & 6)	Primary seal additional requirements
40 CFR 63.120(b)(7)	Provision for unsafe floating roof
40 CFR 63.120(b)(8)	Repair procedures
40 CFR 63.120(b)(9)	Prior notification of seal gap measurement
40 CFR 63.120(b)(10)	Inspections when vessel is empty

The testing shall be performed in accordance with the frequencies specified in each subsection.

4. Specific Monitoring Requirements: See Above in **3. Testing requirements**

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) STORAGE TANKS – CATEGORY 4: HON Group 1 Tanks not requiring Closed Vent System (continued)

5. Specific Recordkeeping Requirements:

a. The permittee shall keep readily accessible records showing the dimensions of the tank and an analysis showing the capacity of the tank. The records shall be kept for as long as the vessel retains Group 1 or Group 2 status and is in operation [40 CFR 63.123(a)].

b. The permittee keep records describing the results of seal gap measurements made in accordance with 40 CFR 63:120(d).

6. Specific Reporting Requirements:

a. 40 CFR 63.122a Initial Notification of Compliance Status
40 CFR 63.122e Reporting of seal gap measurements
40 CFR 63.122h Notification of vessel refill following emptying

b. After each seal gap measurement that detects gaps exceeding the limitations specified in 40 CFR 60.113b(b)4, the permittee shall submit to the Division a report of the information required by 40 CFR 60.115b(b)4,- Seal gap measurement notification.

c. VOC emissions shall be reported as described in **Section B, (18) Group Requirement 1- Previous Synthetic Minor (VOC)**

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) STORAGE TANKS - CATEGORY 5: HON Group Tanks requiring closed vent system

Dow Vent ID	Tank ID
D1.01	1532
D1.01	1533
D10.01	5911
D10.01	5912

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporate 40 CFR 63 Subpart F and G, apply to the tanks 1532, 1533, 5911 and 5912.

1. Operating Limitations:
Each of the storage tanks listed above shall be equipped with a closed vent system and control device meeting the requirement of 40 CFR 63.119(a)(2).

2. Emission Limitations:
Pursuant to 40 CFR 63.112(e), emission of hazardous air pollutants (HAP's) shall meet applicable requirements in 40 CFR 63.119(e) for emission limitations, as well as 40 CFR 63.152 for reporting and records. These requirements are detailed in **Section B, (6) Vent Header System**.

Compliance Demonstration Method:
Compliance with requirements in 40 CFR 63.119(e) shall be demonstrated by following the applicable procedures specified in 40 CFR 63.120(d). These requirements are detailed in **Section B (6) Vent Header System**.

3. Testing Requirements:
Performance testing of the vent header system shall be performed according to 40 CFR 63.120(d)(1)(ii). These requirements are detailed in **Section B, (6) Vent Header System**.

4. Specific Monitoring Requirements:
Monitoring shall be performed in accordance with the Monitoring Plan developed pursuant to 40 CFR 63.120(d)(2).

5. Record keeping Requirements:
Records shall be maintained in accordance with 40 CFR 63.123(a) and (f).

(a) The permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation. For each Group 2 storage vessel, the owner or operator is not required to comply with any other provisions of 40 CFR 63.119 through 63.123 other than those required by this paragraph unless such vessel is part of an emissions average as described in 40 CFR 63.150.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) STORAGE TANKS - CATEGORY 5: HON Group Tanks requiring closed vent system (continued)

(b) The permittee shall keep in a readily accessible location the following records:
(1) A record of the measured values of the parameters monitored in accordance with 40 CFR 63.120(d)(5).
(2) A record of the planned routine maintenance performed on the control device including the duration of each time the control device does not meet the specifications of 40 CFR 63.119 (e)(1) or (e)(2), as applicable, due to the planned routine maintenance. Such a record shall include the information specified in the following paragraphs:
(i) The first time of day and date the requirements of 40 CFR 63.119 (e)(1) or (e)(2), as applicable, were not met at the beginning of the planned routine maintenance, and
(ii) The first time of day and date the requirements of 40 CFR 63.119 (e)(1) or (e)(2) of this subpart, as applicable, were met at the conclusion of the planned routine maintenance.

6. Specific Reporting Requirements:
The requirements below are detailed in **Section B, (6) Vent Header System**.
a. Reporting shall meet the applicable requirements in 40 CFR 63.122(a), (b), and (g).
b. Reporting shall meet the applicable requirements in 40 CFR 63.152(a) and (c) thru (f).

7. Alternative Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) REACTORS:

Dow Vent ID	Reactor ID	Process Unit
P10.01/T10.01	1103	A1
P10.01/T10.01	1141	A1
P10.01/T10.01	1183	A1
P10.01/T10.01	3500	A2
P10.01/T10.01	5100	A10
P10.01/T10.01	5200	A10
T10.01	5280	R10

APPLICABLE REGULATIONS:
401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart RRR, Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes, applies to each of the reactors listed above.

1. **Operating Limitations:**
The vent stream from each of the reactors listed above shall be routed to a distillation column subject to 40 CFR 60 Subpart NNN. There shall be no other releases to the ambient air except from pressure relief valves. The reactors are exempt from all provisions of 40 CFR 60 Subpart RRR, except for the recordkeeping requirement below. [40 CFR 60.700(c)(5)]

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:**
Pursuant to 40 CFR 60.705(r), the permittee shall maintain a process design description for each of the reactor systems listed above for the life of the process. If there are any changes to the process, the process design description shall be updated to include the changes.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(5) DISTILLATION COLUMNS - CATEGORY 1:

Dow Vent ID	Column ID	Process Unit
P10.01/T10.01	1127	A1
P10.01/T10.01	1176	A1
T10.01	1210	B1
T10.01	1260	B1
P10.01/T10.01	3526	A2
P10.01/T10.01	3536	A2
T10.01	3700	B1
T10.01	3710	B1
T10.01	3720	B1
T10.01	4500	B3
P10.01/T10.01	5140	A10
P10.01/T10.01	5141	A10

Dow Vent ID	Column ID	Process Unit
P10.01/T10.01	5150	A10
T10.01	5300	B10
T10.01	5310	B10
T10.01	5320	B10
T10.01	5330	B10
T10.01	5340	B10
T10.01	5350	B10
T10.01	6400	B20
T10.01	6410	B20
T10.01	6800	B30
T10.01	6810	B30

APPLICABLE REGULATIONS:
401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, applies to each of the distillation units listed above.

1. **Operating Limitations:** None

2. **Emission Limitations:**
The permittee shall reduce emissions of total organic compounds (TOC) (less methane and ethane) by 98 weight-percent in each vent stream on and after the date on which the initial performance test is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first. [40 CFR 60.662(a)]

Compliance Demonstration Method:
Each distillation unit shall be in compliance when it is vented to the Vent Header System and control devices which achieve 98 weight-percent reduction of TOC (less methane and ethane). See the 40 CFR 60 Subpart NNN requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(5) DISTILLATION COLUMNS - CATEGORY 1: (Continued)

3. Testing Requirements:

a. For the purpose of demonstrating compliance, all affected facilities shall be run at full operating conditions and flow rates during any performance test. [40 CFR 60.664(a)]
b. The permittee shall perform a performance test as specified by 40 CFR 60.664 within 180 days of implementing a change to an alternative provision of 40 CFR 60.662 with which he or she will comply. [40 CFR 60.665 (a)]
c. Refer to 40 CFR 60 Subpart NNN testing requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System.**

4. Specific Monitoring Requirements:

Refer to 40 CFR 60 Subpart NNN monitoring requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System.**

5. Specific Recordkeeping Requirements:

Refer to 40 CFR 60 Subpart NNN recordkeeping requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System**.

6. Specific Reporting Requirements:

a. If the permittee elects at a later date to use an alternative provision of 40 CFR 60.662 with which he or she will comply, then the Division shall be notified by the permittee 90 days before implementing a change. [40 CFR 60.665 (a)]
b. The permittee is exempt from the quarterly reporting requirements contained in 40 CFR 60.7(c) of the General Provisions for these affected facilities. [40 CFR 60.665 (k)]
c. Refer to 40 CFR 60 Subpart NNN reporting requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System.**

7 Specific Control Equipment Operating Conditions:

Refer to 40 CFR 60 Subpart NNN requirements for the Vent Header System and control devices in **Section B, (6) Vent Header System**.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) VENT HEADER SYSTEM:

(T10.01) **T-10 Thermal Oxidizer System:**
Description: Vent Collection System (Three knockout pots, piping)
Burner/Combustion Chamber (Single secondary burner)
Direct Quench Chamber
Scrubbing System (HCl Absorber, 2 Ionizing Wet Scrubbers)
Induced Draft Fan
Primary fuel: Natural gas
Rated capacity: 30 mmBtu/hr
Date constructed: 1990

(P10.01) **P-10 Adsorption System:**
6300 Preheater
6311, 6312, 6313, 6314 Adsorbers
6316 Surge Tank
Specifications:
Manufacturer: UOP
Adsorbent: Silica Gel
Number of Beds: 4

APPLICABLE REGULATIONS:

T-10 and P-10

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart Kb, "Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984", applies to the emissions of volatile organic compounds (VOC) that are sent to the Vent Header System from storage tanks.

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart NNN, "Standards of Performance for Volatile Organic Compound (VOC) emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations", applies to the emissions of volatile organic compounds (VOC) that are sent to the Vent Header System from distillation columns.

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart RRR, "Standards of Performance for Volatile Organic Compound (VOC) emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes", applies to the emissions of volatile organic compounds (VOC) that are sent to the Vent Header System from reactors.

T-10

401 KAR 63:002, incorporating by reference 40 CFR 63.1-63.15 (National Emission Standards for Hazardous Air Pollutants, (General provisions)), and 40 CFR 63 Subparts F and G. Subparts F and G apply to emissions from D-1 and D-10 Process areas that have HON Group I Vents that vent to the Vent Header System. 40 CFR 63 Subpart F and G apply to Storage Tanks- Category 5: HON Group Tanks requiring closed vent system.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) VENT HEADER SYSTEM: (Continued)

1. Operating Limitations:

a. Pursuant to 40 CFR 63.119(a)(2), the Section B (3) Storage Tanks – Category 5 are Group 1 storage vessels, therefore require the operation of closed vent system and control devise meeting the requirements specified in 40 CFR 63.119(e).
b. Refer to **2. Emission Limitations Compliance Demonstration Method**, below.

2. Emission Limitations:

a. The Vent Header System shall be a closed vent system designed to collect all VOC vapors and gases discharged from 40 CFR 60 Subpart Kb tanks in Section B (3) Storage Tanks – Category 2 and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections. [40 CFR 60.112b (a)(3)(i), Standard for volatile organic compounds (VOC)]
Compliance Demonstration Method:
Compliance shall be demonstrated by monitoring the Vent Header System for leaks using Reference Method 21. [40 CFR 60.112b(a)(3)(i) and 40 CFR 60.485(b)]

b. The control device shall be designed and operated to reduce inlet VOC emissions from 40 CFR 60 Subpart Kb tanks in **Section B, (3) Storage Tanks – Category 2** by 95 percent or greater. [40 CFR 60.112b (a)(3)(ii), Standard for volatile organic compounds (VOC)]
Compliance Demonstration Method:
Compliance shall be demonstrated using one or both of the following methods:
i. By operating and monitoring the Vent Header System and T-10 Thermal Oxidizer in accordance with the Subpart Kb Operating Plan. [40 CFR 60.113b(c)(2)]
ii. By demonstrating compliance with the 98 weight-percent reduction of TOC (less methane and ethane) requirement. (Refer to **Emission Limitations 2.i**)

c. Pursuant to 40 CFR 63.119(e)(1) for control of 40 CFR 63.119 storage vessels, except as specified in 40 CFR 63.119(e)(3) through (5), the control device shall be designed and operated to reduce inlet emissions of total organic HAP by 95 percent or greater.
Compliance Demonstration Method:
i. Performance testing shall be performed as specified in **Testing Requirements**.
ii. Periodic Reporting shall follow specifications in **Specific Reporting Requirements**.
iii. Operating parameters shall be monitored and maintained within the ranges specified in the Notification of Compliance Status Report. [40 CFR 63.120(d)(5)]
iv. Unless the closed vent system is operated under negative pressure [40 CFR 63.120(d)(7)], an annual leak inspection shall be performed as specified in 40 CFR 63.148. [40 CFR 63.120(d)(6)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) VENT HEADER SYSTEM: (Continued)

d. The permittee shall reduce emissions of TOC (less methane and ethane) by 98 weight-percent in each vent stream from 40 CFR 60 Subpart NNN distillation units in **Section B, (5) Distillation Units – Category 1** on and after the date on which the initial performance test is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first [40 CFR 60.662 (c), Standards]

Compliance Demonstration Method:
Compliance shall be determined by routing each Subpart NNN distillation unit vent stream to the T-10 Thermal Oxidizer and calculating the emission reduction (R) of TOC (minus methane and ethane) using the following equation: [40 CFR 60.664(b)(4)(ii)]

$$R = \frac{E_i - E_o}{E_i} \times 100$$

where:
R = Emission reduction, percent by weight.
E_i = Mass rate of TOC entering the control device, kg/hr (lb/hr).
E_o = Mass rate of TOC discharged to the atmosphere, kg/hr (lb/hr)
The mass rates of TOC (E_i, E_o) shall be computed using the following equations:

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i \qquad E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_o$$

where:
C_{ij}, C_{oj} = Concentration of sample component ``j" of the gas stream at the inlet and outlet of the control device, respectively, dry basis, ppm by volume, as determined by Reference Method 18.
M_{ij}, M_{oj} = Molecular weight of sample component ``j" of the gas stream at the inlet and outlet of the control device, respectively, g/g-mole (lb/lb-mole).
Q_i, Q_o = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dscm/min (dscf/min), as determined by Reference Method 2, 2A, 2C, or 2D.
K_2 = 2.494 x 10^{-6} (1/ppm)(g-mole/scm) (kg/g) (min/hr) (metric units), where standard temperature for (g-mole/scm) is 20 ^{o}C, or
= 1.557 x 10 -7 (1/ppm) (lb-mole/scf) (min/hr) (English units), where standard temperature for (lb-mole/scf) is 68 ^{o}F.

e. Emissions of hazardous air pollutants shall comply with the Early Reductions Limits and Compliance Demonstration Method in **Section B, (20) Group Requirement 3 – Early Reductions Requirements**.

f. Emissions of volatile organic compounds shall comply with the plant-wide VOC allowable limit and Compliance Demonstration Method in **Section B, (18) Group Requirement 1 – Previous Synthetic Minors (VOC)**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) VENT HEADER SYSTEM: (Continued)

g. Emissions of particulate shall comply with the plant-wide particulate allowable limit and Compliance Demonstration Method in **Section B, (19) Group Requirement 1 – Previous Synthetic Minors (PM_{10})**.

h. For Group 1 process vents as defined in 40 CFR 63 Subpart G, halogen and hydrogen halide emissions shall be reduced by 95%, or to less than 0.45 kg per hour, which ever is less stringent. [40 CFR 63.113(c)(1)(ii)]

Compliance Demonstration Method:

Pursuant to 40 CFR 63.152, the T-10 scrubbing liquid to flue gas ratio, shall not operate below that set by the latest performance test, and reported in the initial Notification of Compliance, or in subsequent reports to the Administrator.

i. For Group 1 process vents as defined in 40 CFR 63 Subpart G, the owner or operator shall reduce emissions of total organic hazardous air pollutants by 98 weight- percent or to a concentration of 20 parts per million by volume, whichever is less stringent. For combustion devices, the emission reduction or concentration shall be calculated on a dry basis, corrected to a 3-percent oxygen. [40 CFR 63.113(a)(2)].

Compliance Demonstration Method:

Compliance can be determined by measuring either organic hazardous air pollutants or total organic carbon using the procedures in 40 CFR 63.116. [40 CFR 63.113(a)(2)]. The T-10 Combustor shall not operate, on a 24 hour average basis, at a temperature below the temperature reported in the Initial Notification of Compliance Status pursuant to 40 CFR 63.152, or reported in subsequent reports to the Administrator

3. Testing Requirements:

Within 180 days of the issue of final permit V-07-005, the permittee shall conduct a performance test on the T-10 control system. Reference Method 21 of 40 CFR 60 Appendix A shall be used for determining VOC leaks and no detectable emissions in accordance with 40 CFR 60.485 (b). [40 CFR 60.112b (a)(3)(i), Subpart Kb]. The following reference methods in 40 CFR 60 Appendix A shall be used to determine compliance with the percent reduction efficiency. [40 CFR 60.664(b)(1)-(3), Subpart NNN] and [40 CFR 63.120(d)(1)(ii) incorporating by reference 40 CFR 63.116(c)]

i. Method 1 or 1A, as appropriate, for selection of the sampling sites. The control device inlet sampling site for determination of vent stream molar composition or TOC (less methane and ethane) reduction efficiency shall be prior to the inlet of the control device and after the recovery system.

ii. Method 2, 2A, 2C, or 2D, as appropriate, for determination of the gas volumetric flow rates.

iii. Method 18 to determine the concentration of TOC in the control device outlet and the concentration of TOC in the inlet when the reduction efficiency of the control device is to be determined.

iv. The sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used then the samples shall be taken at 15-minute intervals. [40 CFR 60.664(b)(4)(i)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) VENT HEADER SYSTEM: (Continued)

4. Specific Monitoring Requirements:

For the T-10 Unit:

a. The permittee shall monitor the parameters of the Vent Header System and control devices in accordance with the Subpart Kb Operating Plan. [40 CFR 60.113b(c)(2)]

b. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment: [40 CFR 60.663(a)]

   i. A temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ± 0.5 ^{o}C, whichever is greater. The temperature monitoring device shall be installed in the firebox of the thermal oxidizer.

   ii. A flow indicator that provides a record of vent stream flow to the thermal oxidizer at least once every hour for each 40 CFR 60 Subpart NNN distillation unit. The flow indicator shall be installed in the vent stream from each 40 CFR 60 Subpart NNN distillation unit at a point closest to the inlet of the thermal oxidizer and before being combined with any other vent stream. For all other affected facilities that vent to the Vent Header System, the permittee may install the flow indicator(s) at a point after two or more vent streams have been combined.

c. Pursuant to 40 CFR 63.114(a)(4)(ii), scrubbing liquid flow to the T-10 unit shall be monitored with a continuous recorder located at the scrubber influent for liquid flow.

d. Pursuant to 40 CFR 63.114(a)(4)(ii), T-10 gas throughput shall be monitored using one of the procedures specified in 40 CFR 63.114(a)(4)(ii)(A) through(C).

For the P-10 Unit:

e. Pursuant to 40 CFR 60.662(c), the permittee shall, as specified by the Administrator, monitor the process parameter(s) which would indicate proper operation and maintenance of the P-10 Adsorber.

f. Pursuant to 40 CFR 63 Subpart D, the permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:

   i. An on-line GC Analyzer calibrated for methyl chloride, to record at least once every 30 minutes during periods of operation.

   ii. A flow indicator that provides records of the vent stream flow to the adsorption units from the A-2 and A-10 Process Areas. Flow shall be monitored and recorded at least once every 15 minutes during periods of operation.

   iii. A flow indicator that provides records of the vent stream flow from the P-10 Adsorption Unit. Flow shall be monitored and recorded at least once every 15 minutes during periods of operation.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) VENT HEADER SYSTEM: (Continued)

5. Specific Recordkeeping Requirements:

For the T-10 Unit:

a. The permittee shall keep a record of the measured values of the parameters monitored in accordance with the Subpart Kb Operating Plan after installing the Vent Header System and control devices for at least 5 years. [40 CFR 60.115b (a) and (c)(2), Reporting and recordkeeping requirements, and Condition F.2 of SECTION F]

b. The permittee shall keep an up-to-date, readily accessible record of the following data measured during each performance test where the emission control efficiency of a control device is determined: [40 CFR 60.665 (b)(1)]
   i. The average firebox temperature of the incinerator measured at least every 15 minutes and averaged over the same time period of the performance testing, and
   ii. The percent reduction of TOC determined as specified in 40 CFR 60.664(b) achieved by the incinerator.

c. The permittee shall keep up-to-date, readily accessible continuous records of the following operating parameter information:
   i. The equipment operating parameters specified to be monitored under 40 CFR 60.663(a)
   ii. Periods of operation during which the parameter boundaries established during the most recent performance test are exceeded, defined as all 3-hour periods of operation during which the average combustion temperature of the thermal oxidizer was more than 28 C (50 F) below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60.662(a) was determined. [40 CFR 60.665 (c)(1)]

d. The permittee shall keep up to date, readily accessible continuous records of the flow indication specified under 40 CFR 60.663(a)(2), as well as up-to-date, readily accessible records of all periods when the vent stream is diverted from the control device or has no flow rate. [40 CFR 60.665 (d)]

e. Pursuant to 40 CFR 63 Subpart D, the permittee shall keep records of the total organic compounds (TOC, less methane and ethane) combusted each month.

f. The permittee shall keep records specified in 40 CFR 63.123(f).

g. The permittee shall keep continuous records of information specified in 40 CFR 63.152(f). [40 CFR 63.152(a)]

For the P-10 Unit:

h. Pursuant to 40 CFR 60.665 and 40 CFR 60.705, the permittee shall, as specified by the Administrator, maintain records of the parameter(s) which would indicate proper operation and maintenance of the P-10 Adsorber, which includes 3 hours average VOC rejection efficiency.

i. Pursuant to 40 CFR 63 Subpart D, the permittee shall maintain the following records:
   i. The rejection efficiency for VOC and MeCl as obtained in the source last performance test.
   ii. Measured flow rates of the P-10 Vent Stream.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) VENT HEADER SYSTEM: (Continued)

6. Specific Reporting Requirements:

For the T-10 and P-10 Units:

a. The "Subpart Kb Operating Plan" shall contain the information listed below: [40 CFR 60.113b(c)(1)]
   i. Documentation that the Vent Header System and control devices will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device if an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C (1500 °F) is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.
   ii. A description of the parameter or parameters to be monitored to ensure that the Vent Header System and control devices will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

b. The permittee shall report the performance test data required to be recorded in 5.b. above where the emission control efficiency of a control device is determined. [40 CFR 60.665 (b)(1)]

c. The Division may at any time require a report of the operating parameter data in 5.c. above. [40 CFR 60.665 (c)(1)]

d. For the P-10 Unit, pursuant to 40 CFR 60.665 (l) and 40 CFR 60.705 (l), the permittee shall submit semi-annual records all exceedances of the monitored parameters.

e. Emissions of hazardous air pollutants (HAPs) from the Vent Header System shall be reported as described in **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

f. The permittee shall recalculate the emission factors for HCl and Cl_2 after each performance test and submit the results to the Division with a request to update the KYEIS emission factors.

g. VOC emissions shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

h. Pursuant to 40 CFR 63:118(f), the permittee shall report, on a semi-annual basis, the reports of daily average values of monitored parameters when:
   (1) The T-10 HCL Absorber water flow to flue gas ratio is outside the range established in the Notification of Compliance Status.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) VENT HEADER SYSTEM: (Continued)

(2) The pH of the HCL Absorber effluent water is outside the range established in the Notification of Compliance Status. Note: For compliance with this reporting requirement, a report has been submitted on August 30, 2005, which shows that pH is not predictive of HCL efficiency.

For the T-10 Unit:

i. PM_{10} emissions shall be reported as described in **Section B, (19) Group Requirement 2 - Previous Synthetic Minors (PM_{10})**.
j. For each Group 1 storage vessel the permittee shall submit Periodic Reports Required by 40 CFR 63.152(c) as well as the information specified in 40 CFR 63.122(g)(1) and (2). [40 CFR 63.122(a)(4)]
k. The permittee shall submit as part of the Monitoring Plan the information specified in 40 CFR 63.120(d)(2)(i) and 40 CFR 63.120(d)(2)(iii). [40 CFR 63.122(b)]
l. The permittee shall submit reports containing information specified in 40 CFR 63.152(c) thru (e). [40 CFR 63.152(a)(4) and (5)].

7. Specific Control Equipment Operating Conditions:
See previous sections.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(7) PIPELINE EQUIPMENT - CATEGORY 1: This category covers the regulated pipeline components i.e., those subject to equipment leak standards.

Process Area	Type of Connector
Barge Unloading Dock	Light Liquid Valves
	Light Liquid Connectors

Process Area	Type of Connector
D-1 Process Area	Light Liquid Pumps
	Vapor Pressure Relief Valves
	Vapor Valves
	Compressor
	Light Liquid Valves
	Vapor Connectors
	Light Liquid Connectors

Process Area	Type of Connector
D-10 Process Area	Vapor Pressure Relief Valves
	Liquid Pressure Relief Valves
	Compressor
	Vapor Valves
	Light Liquid Valves
	Vapor Connectors
	Light Liquid Connectors

APPLICABLE REGULATIONS:

a. 40 CFR 63 Subpart F (incorporated by reference in 401 KAR 63:002) applies to the Barge Unloading Dock, D-1 and D-10 Process Areas.
b. 40 CFR 63 Subpart H (incorporated by reference in 401 KAR 63:002) applies to the pipeline equipment in the Barge Unloading Dock, D-1 and D-10 Process Areas.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

c. 40 CFR 60 Subpart VV (incorporated by reference in 401 KAR 60:005) applies to the pipeline equipment in the Barge Unloading Dock, D-1 and D-10 Process Areas. However, in accordance with 40 CFR 63.160 (c), the permittee has elected to apply the requirements of 40 CFR 63 Subpart H to all the pipeline equipment in the Barge Unloading Dock, D-1 and D-10 Process Areas. Therefore, the permittee is only required to comply with 40 CFR 63 Subpart H. All VOC in the equipment shall be considered, for purposes of applicability and compliance with Subpart H, as if it were organic hazardous air pollutant (HAP). Compliance with Subpart H shall be deemed to constitute compliance with Subpart VV.

1. Operating Limitations: For the pipeline equipment, the permittee shall implement a leak detection and repair (LDAR) program containing the following elements:

a. Each piece of pipeline equipment within the Barge Unloading Dock, D-1 and D-10 Process Areas shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H [40 CFR 63.162 (c)].
b. When a leak is detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168 and 40 CFR 63.169; and 40 CFR 63:172 through 40 CFR 63.174, the procedures described in 40 CFR 63.162 (f) (1) - (3) shall be followed to identify the leaking piece.
c. Specific standards for each type of pipeline equipment described under **2. Emission Limitations** below.

Compliance Demonstration Method: Pursuant to 40 CFR 63.162 (a), compliance with 40 CFR 63 Subpart H shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections.

2. Emission Limitations: The permittee shall incorporate the following elements in the required leak detection and repair (LDAR) program. If any of the equipment qualifies for the specific exemptions available in 40 CFR 63 Subpart H, the permittee shall maintain records of the reason(s) why the equipment is exempt.

Standards: Pumps in light liquid service [40 CFR 63.163]:

40 CFR 63.163 (a)	Implementation and compliance provisions
40 CFR 63.163 (b)	Monitoring requirements, leak detection levels, frequency of monitoring
40 CFR 63.163 (c)	Repair procedures and time frames
40 CFR 63.163 (d)	Calculation procedures to determine percent leaking pumps and requirements for quality improvement programs
40 CFR 63.163 (e)-(j)	Exemptions for specific types of pumps

Standards: Compressors [40 CFR 63.164]:

40 CFR 63.164 (a)-(e)	Operations requirements
40 CFR 63.164 (f)	Criteria for leak detection
40 CFR 63.164 (g)	Repair procedures and time frames
40 CFR 63.164 (h),(i)	Exemptions for specific types of compressors

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

Standards: Pressure relief devices in gas/vapor service [40 CFR 63.165]:

40 CFR 63.165 (a)	Operational requirements
40 CFR 63.165 (b)	Pressure release procedures
40 CFR 63.165 (c)-(d)	Exemptions for specific types of pressure relief devices

Standards: Sampling Connection Systems [40 CFR 63.166]:

40 CFR 63.166 (a)-(c)	Operational requirements

Standards: Open-ended valves or lines [40 CFR 63.167]:

40 CFR 63.167 (a)-(c)	Operational requirements
40 CFR 63.167 (d)-(e)	Exemptions for specific types of valves

Standards: Valves in gas/vapor service and in light liquid service [40 CFR 63.168]:

40 CFR 63.168 (a)	Operational requirements
40 CFR 63.168 (b)-(d)	Monitoring requirements and intervals
40 CFR 63.168 (e)	Calculation procedures to determine percent leaking valves
40 CFR 63.168 (f)	Leak repair time frames
40 CFR 63.168 (g)	First attempt repair procedures
40 CFR 63.168 (h)-(i)	Exemptions for unsafe-to-monitor and difficult-to-monitor valves

Standards: Pumps, valves, connectors, agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service [40 CFR 63.169]:

40 CFR 63.169 (a)	Monitoring requirements and frequency
40 CFR 63.169 (b)	Leak detection levels
40 CFR 63.169 (c),(d)	Leak repair time frames and procedures

Standards: Delay of repair [40 CFR 63.171]:

40 CFR 63.171	Allowances for delay of repair

Standards: Connectors in gas/vapor service and in light liquid service [40 CFR 63.174]:

40 CFR 63.174 (a)	Operational requirements
40 CFR 63.174 (b)	Monitoring requirements and intervals
40 CFR 63.174 (c)	Procedures for open connectors or connectors with broken seals
40 CFR 63.174 (d)	Leak repair time frames
40 CFR 63.174 (e)	Monitoring frequency for repaired connectors
40 CFR 63.174 (f)-(h)	Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
40 CFR 63.174 (i)	Calculation procedures to determine percent leaking connectors
40 CFR 63.174 (j)	Optional credit for removed connectors

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

Quality improvement program for valves [40 CFR 63.175]:

Pursuant to 40 CFR 63.168 (d)(1)(ii), in Phase III, the permittee may elect to implement the following quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:

40 CFR 63.175 (a)	Quality improvement program alternatives
40 CFR 63.175 (b)	Criteria for ending quality improvement programs
40 CFR 63.175 (c)	Alternatives following achievement of less than 2 percent leaking valves target
40 CFR 63.175 (d)	Quality improvement program to demonstrate further progress
40 CFR 63.175 (e)	Quality improvement program of technology review and improvement

Quality improvement program for pumps [40 CFR 63.176]:

Pursuant to 40 CFR 63.163 (d)(2), if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps or three pumps in the Barge Unloading Dock, D-1 and D-10 Process Areas leak, the permittee shall implement the following quality improvement programs for pumps:

40 CFR 63.176 (a)	Applicability criteria
40 CFR 63.176 (b)	Criteria for ending the quality improvement program
40 CFR 63.176 (c)	Criteria for resumption of the quality improvement program
40 CFR 63.176 (d)	Quality improvement program elements

Compliance Demonstration Method:
A copy of the leak detection and repair (LDAR) program meeting the criteria listed above shall be kept available at a readily accessible location for inspection.

3. Testing Requirements:

a. The permittee shall comply with the following test methods and procedures requirements pursuant to 40 CFR 63.180 (a):
   40 CFR 63.180 (b) Monitoring procedures, test methods and calibration procedures
   40 CFR 63.180 (c) Leak detection monitoring procedures
   40 CFR 63.180 (d) Procedures for determining organic HAP service applicability
b. Fulfill all testing requirement per **2. Emission Limitations.**

4. Specific Monitoring Requirements:

a. See **3. Testing Requirements** above.
b. Fulfill all monitoring requirements per **2. Emission Limitations.**

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

5. Specific Recordkeeping Requirements: [40 CFR 63.181]

a. The permittee may comply with the recordkeeping requirements for the Barge Unloading Dock, D-1 and D-10 Process Areas in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g. quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

b. The permittee shall maintain all records pertaining to the pipeline equipment required by 40 CFR 63.181 (b).

c. For visual inspections, the permittee shall document that the inspection was conducted and the date of the inspection. These records shall be kept for a period of five years, according to 40 CFR 63.181 (c).

d. When a leak is detected, the information specified in 40 CFR 63.181 (d) shall be recorded and kept for five years.

e. If the permittee implements any of the quality improvement programs required by 40 CFR 63.175 and 63.176, the records specified in 40 CFR 63.181 (h)(1)-(9) shall be maintained for the period of the quality improvement program for the Barge Unloading Dock, D-1 and D-10 Process Areas.

6. Specific Reporting Requirements:

The permittee shall submit the following reports:

a. 40 CFR 63.182 (a)(1), Initial Notification. The permittee has fulfilled this requirement through documentation dated October 20, 1995 submitted to the Division.

b. 40 CFR 63.182 (a)(2), Notification of Compliance Status. The permittee has fulfilled this requirement through documentation dated October 20, 1995 submitted to the Division.

c. 40 CFR 63.182 (a)(3), Periodic Reports - The permittee shall submit to the Division, semiannually, the information required by 40 CFR 63.182 (d)(2). The semi-annual reports shall be submitted by January 30 and July 31st of each year and shall cover the last 6 months and the first 6 months of each calendar year respectively.

d. VOC emissions shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(7) PIPELINE EQUIPMENT - CATEGORY 2: This category covers the non-regulated pipeline equipment i.e., equipment that is not subject to any equipment leaks standard but does not qualify as an insignificant activity because combined emissions are greater than 5 tpy.

Process Area	Type of Connector
Non-HON Areas	Light Liquid Pumps
	Vapor Pressure Relief Valves
	Compressor
	Vapor Valves
	Light Liquid Valves
	Vapor Connectors
	Light Liquid Connectors

APPLICABLE REGULATIONS: None

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None.

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:**
   VOC emissions shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(8) A-2 PROCESS AREA:

(A2.06) A-2 Secondary Recovery (# 3595):
Vent Condenser (3644B)

APPLICABLE REGULATIONS:
40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of methyl chloride.

1. Operating Limitations:

a. Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.
a. During operation, the A-2 column shall vent to the Vent Header System at all times except as provided in c. below (V-99-050, Netting emissions reduction requirements).
b. The A-2 column shall vent directly to the atmosphere less than ten percent (10%) of the time that it is operational (V-99-050, Netting emissions reduction requirements).

Compliance Demonstration Method:
Emissions of Methyl Chloride and VOC shall be calculated as follows:

a. Dow Corning shall take daily samples of vent gas using an on-line GC (following the 3644B Condenser) for the A-2 Secondary Recovery line and analyze for methyl chloride and TOC (less methane and ethane) during all periods that A-2 Column is venting to atmosphere and not to the vent header system.
b. Hourly flow rates shall be determined by using flowmeters.
c. Hourly HAP and VOC emissions shall be calculated be multiplying by the daily HAP and VOC concentrations by the average hourly flow rates. For HAPs from 40 CFR 63 Subpart G. For VOC from 40 CFR 60: Subpart NNN.
d. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.
e. Monthly VOC emissions shall be calculated by summing the hourly VOC emissions.
f. The permittee shall determine the percentage of time that the A-2 column vents directly to the atmosphere through the records required in Item f. of **Specific Recordkeeping Requirements**.

2. Emission Limitations:

a. Emissions of hazardous air pollutants shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**
b. Emissions of volatile organic compounds shall comply with the plant-wide VOC allowable limit. Refer to **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

3. Testing Requirements:

Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**, and to **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(8) A-2 PROCESS AREA: (Continued)

4. Specific Monitoring Requirements:

a. Vent HAP and TOC (less methane and ethane) composition shall be determined on a daily basis.
b. Vent flowrate shall be determined on an hourly average basis.

5. Specific Recordkeeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of all measurements.
b. HAP concentration recorded on the LIMS or PI system.
c. Average hourly flow rate.
d. Periods of monitor down time and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.
f. The permittee shall keep records of the total number of hours that the A-2 column is operational and the number of hours that the A-2 column vents directly to the Vent Header System.

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(9) A-10 PROCESS AREA:

(A10.08) A-10 Secondary Recovery (# 5192):
Coolant: Syltherm
(A10.11) A-10 Absorber (#5195)

APPLICABLE REGULATIONS:
40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:005) applies to the emissions of Methyl Chloride and Hydrogen Chloride.

1. Operating Limitations: Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

Compliance Demonstration Method:
Emissions of Methyl Chloride and Hydrogen Chloride shall be calculated as follows:

a. Dow Corning shall take daily samples of vent gas using an on-line GC (following the 5199 Condenser) for the A-10 Secondary Recovery line and at the outlet of the 5195 Absorber for the A-10 Absorber and analyze for methyl chloride and chlorosilanes during all periods that A-10 is venting to atmosphere and not to the vent header system.
b. Continuous flow rates shall be determined by using differential pressure flowmeters.
c. Hourly HAP emissions shall be calculated by multiplying by the daily HAP concentration by the average hourly flow rates.
d. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

3. Testing Requirements:
None.

4. Specific Monitoring Requirements:

a. Vent HAP composition shall be determined on a daily basis.
b. Vent flowrate shall be determined on a continuous basis.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of measurements.
b. HAP concentration recorded on the LIMS or PI system.
c. Average daily mass flow data.
d. Periods of monitor downtime and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(9) A-10 PROCESS AREA: (Continued)

6. Specific Reporting Requirements:

b. HAP emissions shall be reported as described in **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

c. VOC emissions shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B PROCESSES CCR AREA, B-10 PROCESS AREA; and B-20 and B-30 PROCESS AREA:

(10) B PROCESSES CCR:

(B2.01) B-2/B-3 CCR Scrubber (2593)
Scrubbing Liquid: Water

(B10.01) B-10 CCR Scrubber (5393)
Scrubbing Liquid: Water

(B20.01) B-20 CCR Scrubber (6493)
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water

(B30.01) B-30 CCR Scrubber (6893)
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of Hydrogen Chloride.

1. **Operating Limitations:**
Emission of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. **Emission Limitations:**
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:**
The permittee shall monitor the scrubbing liquid flowrate through the scrubber on a daily basis.

5. **Specific Recordkeeping Requirements:**
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Date and time of changeout.
b. Water flowrate through the scrubber.

c. Duration of the changeout.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B PROCESSES CCR AREA, B-10 PROCESS AREA; and B-20 and B-30 PROCESS AREA: (Continued)

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

7. Specific Control Equipment Operating Conditions:
During bed change outs, the scrubber shall be operated in accordance with manufacturer's specifications.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(11) C PROCESS AREA SCRUBBERS:

(C2.01) C-2 Process Venturi Scrubber (1344):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Diluted HCL

(C3.01) C-3 Process Venturi Scrubber (3212):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Diluted HCL

(C10.01) C-10 Process Venturi Scrubbers (5526A & 5526B):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: 5526A Diluted HCL
5526B Diluted HCL

APPLICABLE REGULATIONS:
40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of HAP's from the C2.01 (1344), C3.01 (3212), and C10.01 (5526) scrubbers.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

Compliance Demonstration Method:
Historical mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
The water flowrate to the scrubbers shall be monitored daily.

5. Specific Recordkeeping Requirements:
The water flowrate to the scrubbers shall be recorded daily.

6. Specific Reporting Requirements:
a. HAP emissions shall be reported as described in **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B, (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(11) C PROCESS AREA SCRUBBERS: (Continued)

7. Specific Control Equipment Operating Conditions:

The Venturi scrubbers shall be operated in accordance with manufacturer's specifications. The following minimum average flowrates shall be maintained. Flowrates are based on an hourly-average basis -.

C2.01	-	5 GPM (gallons per minute)
C3.01	-	5 GPM (gallons per minute)
C10.01	-	5526A 4 GPM (gallons per minute) 5526B 2 GPM (gallons per minute)

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(12) C PROCESS AREA ABSORBERS:

(C2.02) C-2 Process Absorber (3052A & B):
Type: Cocurrent Falling Film Scrubber
Scrubbing Liquid: Water

(C3.02) C-3 Process Absorber (3254A &B):
Type: Cocurrent Falling Film Scrubber
Scrubbing Liquid: Water

(C10.02) C-10 Process Absorber (5553A & B):
Type: Cocurrent Falling Film Scrubber
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of Hydrogen Chloride from each of the scrubbers listed above.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) from each of the scrubbers listed above shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants from each of the scrubbers listed above shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

3. Testing Requirements:
See Early Reduction Requirements. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

4. Specific Monitoring Requirements:
The permittee shall monitor the following parameters for each of the scrubbers listed above on a daily basis:
a. Vent stream flow rates.
b. Scrubbing liquid flowrates.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(12) C PROCESS AREA ABSORBERS: (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information for each of the scrubbers listed above:

a. Vent stream flow rates.
b. Water flowrate through the scrubber.
c. Duration of the chlorosilane feed.

6. Specific Reporting Requirements:

HAP emissions from each scrubber shall be reported as described in **Section B (20) Group Requirement 3 - Early Reductions Requirements**.

7. Specific Control Equipment Operating Conditions:

During vent stream flow, each of the scrubbers listed above shall be operated in accordance with manufacturer's specifications.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(13) D-1 and D-10 PROCESSES:

HON Group 1 Vents

(D1.01) D-1 MEVA Column (3416):
Type: Countercurrent Packed Scrubbers
Methanol knockout tank (3423)
Methanol condenser (3422)
Methanol knockout tank (3426)
Methanol Scrubber (1443)

(D10.01) D-10 MEVA Column (5760)
Type: Countercurrent Packed Scrubbers
Methanol knockout tank (5761)
Methanol condenser (5762)
Control Device: T-10

HON Group 2 Vents

(D1.05) T-1483 Wastewater Surge Tank
Control Device: None

HON Group 2 Wastewater streams
D-1 Process
D-10 Process
Control Device: None

APPLICABLE REGULATIONS:
401 KAR 63:002 (40 CFR 63 Subpart F and G apply to the emissions of methanol and methyl chloride. Fugitive emissions requirements for these processes are covered in Section B, (7) Category 1 Pipeline equipment. Refer to **Section B, (6) Vent Header System**, for requirements for the HON Group 1 Vents control requirements.

1. Operating Limitations:

For Group 2 Vents

a. The T-1483 vent flow (D-1.05) shall be maintained at ≤ 0.005 SCMM and the TRE >1.0 to remain a Group 2 Vent Stream 40 CFR 63.113d.

For the Group 2 Wastewater Streams

b. Emissions from the D-1 and D-10 Group 2 Wastewater streams are uncontrolled and are subject to the following limitation to remain Group 2 streams: The annual average concentration of process HAP's must remain below 1000 mg/l [40 CFR 63.132(c)(1)].

REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(13) D-1 and D-10 PROCESSES: (Continued)

Compliance Demonstration Method:
For Group 2 Vents
a. Refer to Monitoring Requirement 4.c.

For Group 2 Wastewater stream
b. Refer to Monitoring Requirement 4.e and Specific Recordkeeping Requirements 5.i.

2. Emission Limitations:

Group 1 Vents

a. Refer to **Section B, (6) Vent Header System**, for limitations and compliance.
b. Emissions of volatile organic compounds (VOC) from the D-10 process shall not exceed 20 tons per year (V-99-050, Netting emissions reduction requirements). Emissions of VOC compounds from D-1 and D-10 shall comply with the **Section B (20) Group Requirement 1 – Previous Synthetic Minors (VOC)**.
c. Emissions of hazardous air pollutants shall comply with the Early Reductions Limits. Refer to Section 20 Group Requirement 3 - Early Reductions Requirements for limits and compliance demonstration method.

Compliance Demonstration Method:
Compliance with the 20 ton per year VOC limit for D-10, the Section 18 Group Requirement 1-Previoius Synthetic Minors (VOC), and the Section 20 Group Requirement 3 – Early Reductions Requirements for Hazardous Air Pollutants, shall be determined by daily measurements of vent VOC concentration and hourly continuous flow monitoring of atmospheric emissions when the units are not venting to the vent header system.

3. Testing Requirements:

None.

4. Specific Monitoring Requirements:

Group 1 Vents
a. The owner or operator of a Group I process vent shall comply with 40 CFR 63.114(d)(1) for any bypass line between the origin of the gas stream and the point where the gas reaches the process vent, as described in 40 CFR 63.107, that could divert the gas stream directly to the atmosphere. [40 CFR 63.114(d)]
b. Vent HAP composition shall be determined, at minimum, on a daily basis, when diverted to atmosphere. [40 CFR 63 Subpart D]
c. Vent flowrate shall be determined on an hourly average basis. [40 CFR 63 Subpart D]
d. All other required monitoring is contained in **Section B (6) Vent Header**.

Group 2 Vents
None, based on Group 2 status determination in 40 CFR 63.115

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(13) D-1 and D-10 PROCESSES: (Continued)

Group 2 HON Wastewater Streams

e. An owner or operator shall comply with 40 CFR 63.114(a)(1) or (a)(2) for each wastewater stream to determine which wastewater streams require control. Parameters to be monitored include:
   i. Wastewater flow rate; and
   ii. Wastewater HAP concentration.

5. Specific Recordkeeping Requirements:

Group 1 Process Vents 40 CFR 63.152

The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of measurements of monitoring as required in **Section B (13) 4, Monitoring Requirements.**
b. HAP concentration recorded on the LIMS or PI system.
c. Hourly flow data.
d. Periods of monitor downtime and the reason(s) for downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.
f. Periods of time when the process vent is diverted to atmosphere.

Group 2 Process Vents

g. Maintain records of the weekly average of measurements, engineering assessments and TRE calculations.

HON Group 2 Wastewater Streams [40 CFR 63: 147(b)(8)

h. Maintain records of the daily average Group 2 wastewater stream flow rate.
i. Maintain records of the daily average Group 2 wastewater stream HAP concentrations.

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B (20) Group Requirement 3 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.
c. For D1.01, or D10.01 reports (in Title V semi-annual reports) of the duration of periods when monitoring data is not collected for each excursion caused by insufficient monitoring data. [40 CFR 152(c)]
d. Reports (in Title V semi-annual reports) of the times when and duration of all periods when D1.01 or D10.01 is diverted to the atmosphere through a by- pass line. [40 CFR 152(c)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(13) D-1 and D-10 PROCESSES: (Continued)

7. Specific Control Equipment Operating Conditions:

a. The 1443 Scrubber water flow rate shall be at least 2 gallons per minute while the scrubber is in operation. When the vent stream from the D-1 MEVA Column is directed to the T-10 thermal oxidizer, the permittee is not required to use the water scrubber.

b. Preventive maintenance shall be performed in accordance with the manufacturer's recommendations. Preventive maintenance shall include check/calibration of critical instruments, e.g. water flow meters or indicators.

c. Refer to **Section B (6) Vent Header System** for Group 1 Vent control requirements

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(14) R-10 PROCESS AREA:

(R10.01) R-10 Rearranger Scrubber (5284):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
The permittee shall monitor the liquid flowrate through the R-10 Rearranger Scrubber.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Date and time of changeout.
b. Water flowrate through the scrubber.
c. Duration of the changeout.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in **Section B (20) Group Requirement 3 - Early Reductions Requirements**.

7. Specific Control Equipment Operating Conditions:
During bed changeouts, the scrubber shall be operated in accordance to manufacturer's specifications.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(15) F-15, AND F-17 PROCESS AREAS:

(F15.01) 2460 Process Tank
(F15.02) 2462 Process Tank
(F15.03) 2463 Process Tank
(F17.01) F-17 Process Tank

APPLICABLE REGULATIONS:
40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of Ethylene Glycol from each of the affected facilities listed above.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

Compliance Demonstration Method:
The permittee shall calculate emissions from each process tank from charging, heat up, and evaporative losses.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
The permittee shall maintain records of the following information:
a. Number of charges or batches.
b. MSDS sheets for each emulsion formulation.

6. Specific Reporting Requirements:
a. HAP emissions shall be reported as described in **Section B (20) Group Requirement 3 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(16) WASTEWATER TREATMENT PROCESS:

(W.02) 824A/824B FSU Units
(W.04) 925/926 Equalization Tanks
(W.23) 824C FSU Units Collection Tank
(W.05) 937 Air Stripper Vent

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of HAP's from the 824C Sump, Equalization Tanks, and the Air Stripper.

1. Operating Limitations: Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits. Refer to **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.

Compliance Demonstration Methods:

a. The permittee shall take wastewater samples daily and analyze for HAP's concentrations from the following locations:
   1. Outlet of the 824A/824B FSU Units
   2. Outlet of 925/926 Equalization tanks
   3. Inlet to the 937 Air Striper
   4. Outlet of the 937 Air Striper

b. Hourly mass flowrates shall be determined using flowmeters at the outlet of the 925 and 926 Equalization Tanks.
c. Hourly HAP emission shall be calculated by multiplying the difference between the most recent inlet and outlet HAP concentrations by the daily flow rates.
d. Monthly HAP emissions shall be calculated by summing the daily HAP emissions.

3. Testing Requirements:
Wastewater HAP concentration measurements shall be performed using U.S. EPA or standard equivalent methods.

4. Specific Monitoring Requirements:

a. Wastewater HAP concentrations shall be determined on a daily basis.
b. Wastewater flowrate shall be determined on an hourly average basis.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(16) WASTEWATER TREATMENT PROCESS: (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of sample collection and flow measurements.
b. Wastewater HAP concentration recorded in the electronic sample management system.
c. Hourly wastewater mass flow data.
d. Periods of monitor downtime and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B (20) Group Requirement 3 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(17) WASTEWATER QUENCH AND FILTER PRESS PROCESSES:

(W.08) 974 By-Product Metal Quench Tank
(W.09) Existing 883 DPR Quench Vessel
(W.10) DPR Quench Basin
(W.13) 951/952 HP Units
(W.22) 1012 By-Product Metal Quench Tank
(W.24) New 883 DPR Quench Vessel
(W.25) By-Product Metal Quench Process (T6201 tank, and 6222 mixer)

APPLICABLE REGULATIONS:
401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart D, "Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants", applies to emissions of:

a. Methyl Chloride from Emission Points W.08, W.22, and W.25.
b. Methyl Chloride from Emission Points DPR Vessel (W.09), HP Units (W.13), and W.24
c. Methyl Chloride from the DPR Quench Basin (W.10).

1. Operating Limitations: None

2. Emission Limitations:

a. Emissions of hazardous air pollutants from each of the affected facilities listed above shall comply with the Early Reductions Limits in **Section B, (20) Group Requirement 3 - Early Reductions Requirements**.
b. Total emissions of volatile organic compounds (VOC) from Emission Point W.24 (New 883 DPR Quench Vessel) shall not exceed 5 tons per year (V-99-050, Netting emissions reduction requirements).

Compliance Demonstration Method:

a. (1) For W.08 W.22, and W.25 emissions of Methyl Chloride shall be calculated as follows:
    i. The permittee shall collect and analyze composite vent samples collected over the entirety of a material transfer from each fluid bed process, annually. Samples will be analyzed for Methyl Chloride.
    ii. The permittee shall supply valid engineering estimates of volume flow rate during batch operation.
    iii. Batch HAP emissions shall be calculated by multiplying by the HAP concentration for that process transfer by the batch displacement volume.
    iv. Monthly HAP emissions shall be calculated by summing the batch HAP emissions.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(17) WASTEWATER QUENCH AND FILTER PRESS PROCESSES: (Continued)

(2) For W.09 and W.24 emissions of Methyl Chloride, shall be calculated as follows.

i. The permittee shall supply valid engineering estimates of volume flow rate during batch operation.

ii. Batch HAP emissions shall be calculated by multiplying by the most recent HAP concentrations respectively by the batch displacement volume.

iii. Monthly HAP emissions shall be calculated by summing the batch HAP emissions.

When emissions from W.24 are routed to the thermal oxidizer, the following shall be used to determine emissions to the thermal oxidizer:

iv. Pollutant emission factors based on samples taken during representative operations.

v. The permittee shall use an insitu flowmeter to determine vent flow rate.

(3) For W.10:

i. When 5900 material is not sent to the 954 tank, emissions of Chloroform, Methyl Chloride, and Methyl Ethyl Ketone shall be based on historical sampling and historical flowrates.

ii. When 5900 material is sent to Tank 954, emissions of Chloroform, Methyl Chloride, and Methyl Ethyl Ketone shall be calculated as follows:
HAP = Quantity of quenched DPR for test period x (HAP concentration when first discharged into the basin – HAP concentration after 60 days)

(4) For W.13, emissions of Methyl Chloride, Methyl Ethyl Ketone shall be based on historical sampling and historical flowrates.

b. For W.24 emissions of VOC, shall be calculated as follows. Keep records of the monthly and 12-month rolling total of VOC.

i. The permittee shall supply valid engineering estimates of volume flow rate during batch operation.

ii. Batch VOC emissions shall be calculated by multiplying by the most recent VOC concentrations respectively by the batch displacement volume.

iii. Monthly VOC emissions shall be calculated by summing the batch VOC emissions.

When emissions from W.24 are routed to the thermal oxidizer, the following shall be used to determine emissions to the thermal oxidizer:

iv. Pollutant emission factors based on samples taken during representative operations.

v. The permittee shall use an insitu flowmeter to determine vent flow rate.

3. Testing Requirements:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(17) WASTEWATER QUENCH AND FILTER PRESS PROCESSES: (Continued)

4. Specific Monitoring Requirements:

a. The permittee shall take samples of vent gas and analyze for pollutant concentration as specified in the Emission Limitations Compliance Demonstration Methods above.
b. The permittee shall supply valid engineering estimates of volume flow rates as specified in the Emission Limitations Compliance Demonstration Methods above.
c. When 5900 materials are sent to Tank 954, analyze DPR gels using time lapse VOC analysis once a year.

5. Specific Recordkeeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information:

a. For W.08, W.09, W.22, W.24, and W.25:
   (1) The number of batches processed.
   (2) The batch displacement volume.
   (3) The HAP concentration.
   (4) The VOC concentration.
b. For W.10:
   (1) When 5900 material is not sent to 954 tank, records of the most recent flow rate and concentrations.
   (3) When 5900 materials are sent to 954, maintain W.10 time-lapse samples used to determine emissions.
c. For W.13, records of the most recent flow rate and concentrations.
d. See the **Specific Monitoring Requirements** above.

6. Specific Reporting Requirements:

a. HAP emissions shall be reported as described in **Section B (20) Group Requirement 3 - Early Reductions Requirements**.
b. VOC emissions shall be reported as described in **Section B (18) Group Requirement 1 - Previous Synthetic Minors (VOC)**.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(18) GROUP REQUIREMENT 1 - PREVIOUS SYNTHETIC MINORS (VOC):

This section of the permit contains an overall emissions cap for volatile organic compounds. This emission cap covers all VOC emission points that the permittee is currently permitted to operate. In considering the net significant emission change for this facility, the emission points listed in the table below were considered. The overall emissions cap applies to these points and process equipment which vents to these points but is not otherwise listed only and not to future sources of VOC that the permittee may construct/operate.

Dow ID	Emission Unit Description	Dow ID	Emission Unit Description
A1.05	Dowtherm A Vent Condenser	C10.01	Process Venturi
A1.07	Dowtherm G Vent Condenser	C10.06	5918 Silicone Tank
A2.01	Hot Oil Furnace	C10.07	5919 Silicone Tank
A2.05	Dowtherm A Vent Condenser	D1.01	D-1 MEVA Column
A2.06	Secondary Recovery	D1.03	Methanol Storage Tank
A10.01	Syltherm Furnace	D1.04	Methanol Storage Tank
A10.08	Secondary Recovery Absorber	D1.05	Waste Acid Tank
B1.01	Impurities Reactor - 1236	-	Old Waste Acid Tank
B1.02	Impurities Reactor - 1237	D10.01	D-10 MEVA Column
B1.03	Impurities Reactor - 1289	D10.03	Methanol Storage Tank
B1.04	Dowtherm A Vent Condenser	D10.04	Cooling Tower
B10.03	Impurities Reactor	F2.01	F-2 Process Vent
C2.01	Process Venturi	F2.27	Storage Tank 1548
C2.05	Dowtherm G Vent Condenser	F4.01	Process Tank 2005
C2.06	1547 Silicone Tank	F4.02	Process Tank 2007 B&C
C2.08	DTG Vaporizer Furnace	F5.01	F-5 Reactor Vent
C2.09	1543 Fresh Heptane Tank	F5.02	F-5 Process Vent
C2.10	1542 Spent Heptane Tank	F6.01	F-6 Process Vent
C3.01	Process Venturi	F9.01	F-9 Process Vent
C3.04	3214 Process Tank	F9.03	Silicone Tank 1538

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Dow ID	Emission Unit Description	Dow ID	Emission Unit Description
F9.05	Silicone Tank 1537	U.08	790 Fuel Oil #6 Tank
F9.09	Silicone Tank 2705 B	U.11	767 Boiler
F15.01	Process Tank 2460	W.01	WWTP 815 Sump
F15.02	Process Tank 2462	-	WWTP 4301 Sump
F15.03	Process Tank 2463	W.02	FSU Units 824
F15.05	Process Tank 2457	W.03	Waste Fluid Tank 923
F15.06	Process Tank 2458	W.04	Equalization Tanks 925/926
F15.07	Organics Tank 2007A	W.05	937 Air Stripper
F17.01	F-17 Process Vent	-	Pilot Air Stripper
FIN.01	Finishing DTA Furnace		Intermittent Vents
FIN.03	Dowtherm A Vent Condenser	W.08	974 By-Product Metal Quencher
GAS.01	Unleaded Gas Storage	W.09	Old 883 DPR Quench vent to atmosphere
GAS.02	Diesel Fuel No.2 Storage	W.10	DPR Quench Ponds
HW.01	Waste Loading Site #1	W.13	Hydroxide Precipitators
HW.02	Waste Loading Site #2	W.17	P1-1003 Seal Fluid Vent
HW.03	Waste Loading Site #3	W.18	Process Tank 1002
L1.02	Process Tank 2407	W.19	By-Product Metal Basins
L1.03	Process Tank 2410	W.21	940/941 Aquafloc Tanks
L2.01	L-2 Syltherm Furnace	W.22	1012 By-Product Quencher
L2.02	L-2 Process Tank	W.23	824C Process Tank
P10.01	P-10 Pressure Swing Adsorber	W.24	New 883 DPR Quench vent to atmosphere.
P10.03	WWTP Quenching	W.25	3301 By-product Metal Quench Process (T6201 tank, 6222 mixer, 6223 pug mill)
S10.01	S-10 Splitter System Vent	W.26	3301 By-product Metal Quench Process (6223 extruder)
S10.03	Silicone Tank 5916	A-FUG	A Process Fugitives
T10.01	T-10 Thermal Oxidizer	B-FUG	B Process Fugitives
U.01	703 Boiler	C-FUG	C Process Fugitives
U.02	766 Boiler	D-FUG	D Process Fugitives
U.15	657 Boiler	T-FUG	T Process Fugitives
U.06	785 Fuel Oil #2 Tank	U.07	3100 Fuel Oil #6 Tank

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. Operating Limitations: None

2. Emission Limitations:

Emissions of volatile organic compounds from the Carrollton plant shall not exceed 145 tons during any consecutive 12-month period. This emission limit applies only to those VOC emission sources currently existing at the Carrollton plant. These emission sources, which include process equipment which vent to these emission sources but are not otherwise listed, are listed in the table above. This emission limit shall not apply to new VOC emission sources constructed and operated after the issuance of the permit V-99-050 (revision 3). [Netting requirement from V-99-050 (revision 3)]

Note: A2.06, D1.01, W.09 are also subject to individual emission/operational limits to ensure that the reductions applied during the netting process are state- and federally-enforceable. For these individual emission/operational limits, please see the individual emission point subsections in **Section B**.

Compliance Demonstration Method:

a. The permittee shall calculate and maintain records of volatile organic compound emissions from each source of VOC emissions listed above on a monthly basis.
b. The permittee shall maintain records of VOC emissions from the VOC sources listed above for all consecutive 12-month periods.
c. The compliance demonstration methodology for the individual emission/operational limits can be found under individual emission point subsections in **Section B**.

3. Testing Requirements:

Testing for the purpose of collecting actual VOC emissions data shall be similar to the Early Reductions requirements. Emissions data shall consist of documented results from source tests using an EPA Reference Method, EPA Conditional Method, or the owner's or operator's source test method which has been validated pursuant to Method 301 of 40 CFR 63, Appendix A. However, if one of the following conditions exists, an owner or operator may submit, in lieu of results from source tests, calculations based on engineering principles, emission factors, or material balance data as actual emission data for VOC emission reporting purposes:

a. No applicable EPA Reference Method, EPA Conditional Method, or other source test method exists;
b. It is not technologically or economically feasible to perform source tests;
c. It can be demonstrated to the satisfaction of the Division that the calculations will provide emission estimates of accuracy comparable to that of any applicable source test method;
d. For base year emission estimates only, the base year conditions no longer exist at an emission point at the Carrollton plant and emission data could not be produced for such an emission point, by performing source tests under currently existing conditions and converting the test results to reflect base year conditions, that is more accurate than an estimate produced by using engineering principles, emission factors, or a material balance; or

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(18) GROUP REQUIREMENT 1 - PREVIOUS SYNTHETIC MINORS (VOC): (Continued)

e. The emissions from one or a set of emission points at the Carrollton plant are small compared to total source emissions and potential errors in establishing emissions from such points will not have a significant effect on the accuracy of total emissions established for the source.

4. Specific Monitoring Requirements:

See previous sections for individual Emission Points requirements.

5. Specific Recordkeeping Requirements:

a. Each VOC emission unit shall be uniquely identified with a tag, label or other markings consistent with the emission unit description or emission unit identification number. Emission point identification systems implemented for the purposes of Early Reductions will satisfy this requirement.
b. The permittee shall keep records of calculations used to determine VOC emissions. The permittee shall retain all monitoring data and records, including supporting emissions calculations, for a period of 5 years from the date of monitoring, measurement, report, or application. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications.
c. In addition to monitoring emissions during normal operation, all periods of equipment malfunction shall be monitored. Records indicating the date and duration of each equipment malfunction shall be maintained.

6. Specific Reporting Requirement:

a. Total VOC emissions from the Carrollton plant shall be submitted semiannually with the reports required in General Condition F.5. in **Section F**. The report shall include emissions for each VOC emission source listed in the table above.
b. All emissions resulting from equipment malfunctions shall also be reported. Malfunctions shall be identified, the cause of the malfunction, and what actions that the permittee undertook to minimize the emissions. The permittee shall continue to be responsible for meeting all requirements of 401 KAR 50:055 during periods of malfunction. Emissions during periods of a malfunction shall be determined based on what they would have been had that malfunction not occurred. During periods when monitoring data is missing or unavailable, the permittee shall report emissions from continuous processes as (1) equivalent to the third-highest daily average recorded during the relevant semi-annual reporting period **or** (2) submit alternate emissions calculations with justification. For batch processes, the average emission rate may be used to estimate emissions.

7. Specific Control Equipment Operating Conditions:

See individual emission point subsections in **Section B.**

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(19) GROUP REQUIREMENT 2 - PREVIOUS SYNTHETIC MINORS (PM_{10}):
This section covers those groups of emission points that were permitted in the past as 'synthetic minors' for particulate matter (PM_{10}) with emission limits to preclude the applicability of 401 KAR 51:017, "Prevention of significant deterioration of air quality".

APPLICABLE REGULATIONS: None

Permit C-88-068 issued April 28, 1988 covering the NAMEX expansion and including the following particulate emission sources:

(A10.05) A-10 Silicon/Sand Hoppers: (5210, 5215)
Both hoppers vented through a single baghouse (5212)
(Now listed as insignificant activity)

(A10.06) A-10 Copper Hoppers (5220)
Vent through bagfilter (5122)
(Now listed as insignificant activity)

(A10.07) A-10 Catalyst Hoppers (5218)
Vented through bagfilter (5219)
(Now listed as insignificant activity)

(G10.01) G-10 Vacuum Pump (5024)
Vented through bagfilter
(Now listed as insignificant activity)

(G10.03) G-10 Sand Bin, (5028)
Vented through a bagfilter (5029)
(Now listed as insignificant activity)

(G10.04) G-10 Grinder (5009) and G-10 Classifier (5010)
Vented through cyclone (5011) and baghouse (5019)
(Now listed as insignificant activity)

(G10.05) G-10 Ground Silicon Bin, 5006
Vented through bagfilter (5033)
(Now listed as insignificant activity)

(G10.06) G-10 Ground Silicon Bin, 5007
Vented through bagfilter (5034)
(Now listed as insignificant activity)

(T10.01) Vent Header System T-10 Thermal Oxidizer
Emissions controlled by Ionizing Wet Scrubber (IWS)

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(19) GROUP REQUIREMENT 2 - PREVIOUS SYNTHETIC MINORS (PM_{10}): (Continued)

1. Operating Limitations: N/A

2. Emission Limitations:

Combined emissions of particulate matter (PM_{10}) from the affected facilities listed above shall not exceed 15 tons during any consecutive 12-month period to preclude applicability of PSD.

Compliance Demonstration Method:

a. The permittee shall maintain monthly records of particulate matter (PM_{10}) emissions from each of the affected facilities listed above to demonstrate that emissions will be less than the significant emission rates specified in 401 KAR 51:017, Prevention of Significant Deterioration.

b. For all affected facilities listed above, except T10.01, monthly emissions from each of the affected facilities above shall be calculated according to the following equation:

Monthly Mass Emission Rate = [Monthly air (or nitrogen) flowrate through baghouse] x [Manufacturer-guaranteed grain loading]

c. For T10.01, monthly emissions shall be calculated based on the latest performance test particulate emissions results according to the following equation.

Monthly Mass Emission Rate = [Ionizing Wet Scrubber (IWS) Emission factor x hours of operation with IWS operating] + [IWS-off Emission factor x hours of operation without IWS operating]

3. Testing Requirements:

A performance test of the T-10 Unit for PM shall be conducted while the IWS is operating and while the IWS is not operating, in conjunction with testing required in **Section B(6)**.

4. Specific Monitoring Requirements:

For T10.01, the permittee shall monitor whether the IWS is operating or not using hourly-average voltage data.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Design and/or manufacturer's specifications for each baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).
Monthly records of PM_{10} emissions from each of the affected facilities listed above.

b. For T10.01:
(1) The particulate emission results from the latest performance test.
(2) Hourly average IWS voltage data.
(3) Hours per month that Vent Header System is operating that the IWS is operating.
(4) Hours per month that Vent Header System is operating that the IWS is not operating.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(19) GROUP REQUIREMENT 2 - PREVIOUS SYNTHETIC MINORS (PM_{10}): (Continued)

6. Specific Reporting Requirement:
Monthly PM_{10} emissions shall be submitted semiannually with the reports required in General Condition F.5. in **Section F**.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(20) GROUP REQUIREMENT 3 - EARLY REDUCTIONS REQUIREMENTS:
Pursuant to 40 CFR 63.73, the Early Reduction Source is all HAP emission points located within the contiguous plant boundaries of Dow Corning Corporation at 4770 US Highway 42, Carrollton, Kentucky. The source includes all HAP point sources and some area sources within the wastewater treatment process. Boilers and equipment leaks are not included in the Early Reduction Source. All Early Reduction emission points at the time of issuance of this permit, which include process equipment which vent to these emission sources but are not otherwise listed, are listed below:

Early Reduction Source, Table of Emission Units			
Dow ID	**Emission Unit Description**	**Dow ID**	**Emission Unit Description**
A1.05	Dowtherm A Vent Condenser	C10.02	C-10 Process Absorber
A2.05	Dowtherm A Vent Condenser	C10.05	Acid Pit Vent
A2.06	A-2 Secondary Recovery	D1.01	D-1 MEVA Column
A10.08	A-10 Secondary Recovery	D1.03	Methanol Tank 1520
B1.01	1236 Impurities Reactor	D1.04	Methanol Tank 1536
B1.03	1289 Impurities Reactor	D1.05	Waste Acid Tank 1483
B1.04	B-1 MCDS Dowtherm A Condenser	D10.01	D-10 MEVA Column
B2.01	B-2/B-3 CCR Scrubber	D10.03	Methanol Tank 5915
B10.01	B-10 CCR Scrubber	D10.04	D-10 Area Cooling Tower
B10.03	B-10 Impurities Reactors	DPR.02	HCl Scrubber 1148 (DPR Reactor 1141)
B20.01	B-20 CCR Scrubber (6493)	F2.01	F-2 Process Vent
B20.03	B-20 Impurities Reactors	F4.01	2005 Process Tank
B30.01	B-30 CCR Scrubber	F4.02	2007 Process Tank
B30.03	B-30 Impurities Reactors	F5.01	F-5 Reactor Vent
C2.01	C-2 Process Venturi	F5.02	F-5 Process Vent
C2.02	C-2 Process Absorber	F6.01	F-6 Process Vent
C2.03	C-2 Rearranger Venturi	F15.01	2460 Process Tank
C2.09	Fresh Heptane Tank 1543	F15.02	2462 Process Tank
C2.10	Spent Heptane Tank 1542	F15.03	2463 Process Tank
C3.01	C-3 Process Venturi	F15.06	Ethylene Glycol Tank 2458
C3.02	C-3 Process Absorber	F17.01	F-17 Process Tank
C3.03	Rearranger Venturi	FIN.03	Finishing Dowtherm A Vent Condenser
C10.01	C-10 Process Venturi	GAS.01	Unleaded Gasoline Tank EQ009

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Dow ID	Emission Unit Description	Dow ID	Emission Unit Description
GAS.02	Diesel Fuel Tank EQ010	W.03	923 Waste Storage Tank
HW.01	Waste Loading from Tanks 5537 & 5772	W.04	925/926 Equalization Tanks
HW.02	Waste Loading from Tanks 923	W.05	937 Air Stripper Vent
HW.03	Waste Loading from Tanks 1542	W.08	974 By-product Metal Quench Tank
L2.02	L-2 Process Vent	W.09	883 DPR Quench Vessel
P10.01	P-10 Adsorption System	W.10	DPR Quench Basin
P10.03	Adsorbent Quenching	W.13	951/952 HP Units
R10.01	R-10 Rearranger Scrubber	W.22	By-product Metal Quench Tank 1012
T10.01	T-10 Thermal Oxidizer Unit	W.23	824C FSU Collection Tank
U.06	Fuel Oil #2 Tank 785	W.24	New DPR Quench 883 Vessel
U.10	20% HCl Storage Tank	W.25	3301By-product Metal Quench Process (T6201 tank, 6222 mixer, 6223 pug mill)
W.01	815 Sump Vent	W.26	3301By-product Metal Quench Process (6223 extruder)
W.02	824A/824B FSU's		

APPLICABLE REGULATIONS:

In accordance with section 112(i)(5) of the Clean Air Act and 40 CFR 63, Subpart D, "Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants" (incorporated by reference in 401 KAR 63:002), this permit grants each emission unit in the Early Reductions Source a 6-year extension from the compliance date of the otherwise applicable standard promulgated under section 112d of the Clean Air Act. In lieu of complying with applicable section 112(d) standards, the permittee accepts the following Alternative Emission Limitations, monitoring, record keeping, emission calculations, and reporting requirements for the Early Reductions Source.

The Alternative Emission Limitations shall be effective until six years after the compliance date for the last promulgated standard under section 112(d) of the Clean Air Act that is applicable to any emission unit in the Early Reductions Source. The Alternate Emission Limitations shall expire six years after the last applicable compliance date for all emission units in the existing source which shall comply with the standard promulgated under section 112(d) of the Clean Air Act.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(20) GROUP REQUIREMENT 3 - EARLY REDUCTIONS REQUIREMENTS: (Continued)

1. Operating Limitations: None

2. Emission Limitations:

Pursuant to 40 CFR 63.73, the permittee has defined their Early Reduction Source as the entire existing facility except for Boilers, Indirect Heat Exchangers, and Pipeline Equipment. As an emission limit, the permittee has accepted the following limitation:

30.3 Megagrams/ year of Total Gaseous Hazardous Air Pollutants

30.3 Megagrams/ year of Weighted Gaseous Hazardous Air Pollutants

Compliance with the Alternative Emission Limitations shall be determined on a calendar year basis.

Compliance Demonstration Method:

a. The permittee shall calculate and maintain records of Hazardous Air Pollutants (HAP) emissions from each source of HAP emissions listed above on a monthly basis.
b. The permittee shall maintain records of HAP emissions from the HAP sources listed above for all consecutive 12-month periods.
c. The compliance demonstration methodology for the individual emission/operational limits can be found under individual emission points in **Section B**. To calculate the MeCl and Methanol emission rates for Early Reductions:
    i. The permittee shall monitor HAP concentrations as specified in the permit sections for emission points A2.06, A10.08, D1.01 and D10.01.
    ii. Hourly mass flow will be determined by using a flowmeter.
    iii. Hourly uncontrolled HAP emissions shall be calculated by multiplying the HAP concentration determined that day by the measured hourly mass flow rates.
    iv. Controlled emissions shall be calculated by multiplying uncontrolled emissions by (1- control efficiencies determined by from the most recent performance test).
    v. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.

3. Testing Requirements:

In addition to any previously listed Specific Testing Requirements, pursuant to 40 CFR 63.74(g), Baseline Post-Reduction estimates shall be based on:

The best available data representing actual emissions for the purpose of establishing base year or post-reduction emissions under this section shall consist of documented results from source tests using an EPA Reference Method, EPA Conditional Method, or the owner's or operator's source test method which has been validated pursuant to Method 301 of 40 CFR 63, Appendix A. However, if one of the following conditions exists, an owner or operator may submit, in lieu of results from source tests, calculations based on engineering principles, emission factors, or material balance data as actual emission data for establishing base year or post-reduction emissions:

(1) No applicable EPA Reference Method, EPA Conditional Method, or other source test method exists;
(2) It is not technologically or economically feasible to perform source tests;

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(20) GROUP REQUIREMENT 3 - EARLY REDUCTIONS REQUIREMENTS: (Continued)

(3) It can be demonstrated to the satisfaction of the Division that the calculations will provide emission estimates of accuracy comparable to that of any applicable source test method;
(4) For base year emission estimates only, the base year conditions no longer exist at an emission point in the source and emission data could not be produced for such an emission point, by performing source tests under currently existing conditions and converting the test results to reflect base year conditions, that is more accurate than an estimate produced by using engineering principles, emission factors, or a material balance; or
(5) The emissions from one or a set of emission points in the source are small compared to total source emissions and potential errors in establishing emissions from such points will not have a significant effect on the accuracy of total emissions established for the source.

4. Specific Monitoring Requirements:

Specific monitoring requirements are listed for each of the emission sources in the table above, in the **Section (B)**.

5. Specific Recordkeeping Requirements:

a. Each emission unit included in the Early Reductions Source shall be uniquely identified with a tag, label or other markings consistent with the emission unit description or emission unit identification number.
b. The permittee shall keep records of calculations, used to determine HAP and weighted HAP emissions. The permittee shall retain all monitoring data and records, including supporting emissions calculations, for a period of 5 years from the date of monitoring, measurement, report, or application. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications.
c. In addition to monitoring emissions during normal operation, all periods of equipment malfunction shall be monitored. Records indicating the date and duration of each equipment malfunction shall be maintained.

6. Specific Reporting Requirements:

a. Total HAP emissions from the Early Reductions Source shall be submitted semiannually with the reports required in General Condition F.5. in SECTION F. The report shall include emissions for each emission unit identified in the Early Reduction Source. The first report shall be submitted on or before the 31st of the month following the end of the calendar half in which the permit is issued. The first report shall also include a complete set of **all** emission calculations. The complete set of calculations are not required to be submitted with subsequent reports, but the permittee shall include any changes in emission factors, control efficiencies or method of calculation. These reports shall include complete calculations for any new de minimis source that began operation during the reporting period. A de minimis source is one that has the potential to emit less than uncontrolled ten (10) percent and controlled emissions less than one (1) percent of the source wide threshold.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(20) **GROUP REQUIREMENT 3 - EARLY REDUCTIONS REQUIREMENTS:** (Continued)

b. All emissions resulting from equipment malfunctions shall also be reported. Malfunctions shall be identified, the cause of the malfunction, and what actions that the permittee undertook to minimize the emissions. The permittee shall continue to be responsible for meeting all requirements of 401 KAR 50:055 during periods of malfunction. Emissions during periods of a malfunction shall be determined based on what they would have been had that malfunction not occurred. During periods when monitoring data is missing or unavailable, the permittee shall report emissions from continuous processes as (1) equivalent to the third-highest daily average recorded during the relevant semi-annual reporting period **or** (2) submit alternate emissions calculations with justification. For batch processes, the average emission rate may be used to estimate emissions.

7. **Specific Control Equipment Operating Conditions:**
See individual emission point subsections in **Section B**.

8. **Alternate Operating Scenarios:** None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(21) GROUP REQUIREMENT 4 – DE MINIMIS EARLY REDUCTIONS SOURCES:

The following Affected Facilities would be otherwise considered insignificant emission sources, except they are part of the Early Reduction Source and shall comply with the Alternative Emission Limitations, Recordkeeping and Reporting.

(A1.05)	A-1 Dowtherm A Vent Condenser (# 1164)
(A2.05)	A-2 Dowtherm A Vent Condenser (# 3518)
(B1.04)	B-1 MCDS Dowtherm A Condenser
(FIN.03)	Finishing Dowtherm A Vent Condenser (# 2159)
(B1.01)	B-1 Impurities Reactor 1236 (Emissions during purging)
(B1.03)	B-1 Impurities Reactor 1289(Emissions during purging)
(B10.03)	B-10 Impurities Reactors (5370, 5380) (Emissions during purging)
(B20.03)	B-20 Impurities Reactors (6470, 6480) (Emissions during purging)
(B30.03)	B-30 Impurities Reactors (6870, 6880) (Emissions during purging)
(P10.03)	Adsorbent Quenching
(C10.05)	Covered Acid Pit: Vent with Blower (5576)
(DPR.02)	DPR Reactor #1141
(HW.01)	Waste Loading from Tanks 5537 & 5772
(HW.02)	Waste Loading from Tanks 923
(HW.03)	Waste Loading from Tanks 1542
(F2.01) F-2 Process Vent:	Process Tank 4064
(F5.01) F-5 Reactor Vent:	Process Tank 2082 and Reactor 2080
(F5.02) F-5 Process Vent:	Process Tank 2321
(F6.01) F-6 Process Vent:	Process Tanks 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2045, and 2040
(L2.02) L-2 Process Vent:	Process Tank 7066

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(21) GROUP REQUIREMENT 4 – DE MINIMIS EARLY REDUCTIONS SOURCES: (Continued)

APPLICABLE REGULATION:
40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of Biphenyl from A1.05, A2.05, B1.04, and FIN.03.

40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of Hydrogen Chloride from B1.01, B1.03, B10.03, B20.03, and B30.03 reactors during maintenance.

40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of Hydrogen Chloride from the adsorber (P10.03) above during maintenance

40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of Hydrogen Chloride from the Acid Pit Vent (C10.05).

40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of Hydrogen Chloride from the DPR Reactor (DPR.02).

40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of n-hexane and methyl chloride from the 5537 and 5772 tanks waste loading operations (HW.01).

40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of toluene from the 923 tank waste loading operations (HW.02).

40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of n-hexane and methyl chloride from the 1542 tank waste loading operations (HW.03).

40 CFR 63 Subpart D (incorporated by reference in 401 KAR 63:002) applies to the emissions of Formaldehyde from F2.01, F5.01, F5.02, F6.01, and L2.02.

1. Operating Limitations:

Emission of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits, refer to **Section B, (20) Group 3- Early Reduction Requirements**.

Compliance Demonstration Method:

a. For P10.03 Absorbent Quenching, compliance shall be demonstrated by mass balance.
b. For C10.05 Acid Pit Vent, compliance shall be demonstrated by mass balance and estimated partial pressure.
c. For the DPR Reactor #1141 (DPR.02), compliance shall be demonstrated by mass balance.
d. Emissions from the waste loading operations HW.01, HW.02, and HW.03 shall be calculated by mass balance.
e. For the F2.01, F5.01, F5.02, F6.01, and L2.02 compliance shall be demonstrated by knowledge of composition, and testing or calculations of vent flow rates.

(21) GROUP REQUIREMENT 4 – DE MINIMIS EARLY REDUCTIONS SOURCES:
(Continued)

2. Emission Limitations:
Refer to **Section B, (20) Group 3- Early Reduction Requirements**.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
None

5. Specific Recordkeeping Requirements:

a. The permittee shall record the number of periods of venting and volume of the Dowtherm condensers from A1.05, A2.05, B1.04, and FIN.03.
b. The permittee shall maintain a readily accessible MSDS for the Dowtherm fluid from A1.05, A2.05, B1.04, and FIN.03.
c. The permittee shall keep records of the number of reactor change outs from B1.01, B1.03, B10.03, B20.03, and B30.03 reactors.
d. For P10.03 Absorbent Quenching, the permittee shall keep a record of the amount of absorbent quenched.
e. For C10.05 Acid Pit Vent, the permittee shall keep records of the following information:
   i. Rated vent capacity.
   ii. Acid concentration.
f. For the DPR Reactor #1141 (DPR.02), the permittee shall maintain up-to-date, readily accessible records of the following information:
   Number 1141 Reactor cleanout activities.
g. The permittee shall maintain records of the amount and composition of the waste loading onto tanks 5537, 5772, 923, and 1542 tanks.

6. Specific Reporting Requirements:
Emissions of HAP's from all sources shall be reported as described in **Section B, (20) Group 3- Early Reduction Requirements**.

7. Specific Control Equipment Operating Conditions:
None

8. Alternate Operating Scenarios:
The permittee may use any heat transfer fluid. The permittee shall report a change in material in its Early Reduction reports from A1.05, A2.05, B1.04, and FIN.03.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

1. Storage Tanks - The following tanks qualify as insignificant activities and are exempt from 40 CFR 60 Subpart Kb (incorporated by reference in 401 KAR 60:005) for one or more of the following reasons:
   a. They are not used to store any volatile organic liquids (VOLs) as defined in 40 CFR 60.11b (k);
   b. Have a capacity less than 40 cubic meters [40 CFR 60.110b (a) & (b)];
   c. Were constructed prior to July 23, 1984 and have never been reconstructed or modified since that date [40 CFR 60.110b (a)].

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
A10.09	5130	A10.09	5230	A10.09	5251
C3.04	3214	C3.05	3260	C2.06	1547
C10.03	5544	C10.06	5917	C10.07	5918
D-1 MEVA	1487	D-10 MEVA	5914	D1.02	1488
D10.02	5913	F1.01	2064	F1.02	2054
F1A.01	2189	F1.03	1521	F1.04	2714C
F1A.01	2189	F1A.02	2714A	F2.02	4015
F2.03	2019	F2.04	2056	F2.05	2210
F2.06	2211	F2.07	2212	F2.08	2213
F2.09	2214	F2.10	2215	F2.11	2216
F2.12	2219	F2.13	2220	F2.14	2221
F2.15	2222	F2.16	2223	F2.17	2225
F2.18	2229	F2.19	2242	F2.20	2243
F2.21	2705A	F2.22	2701A	F2.23	4166
F2.24	2278	F2.25	2035	F2.26	2016
F2.27	1548	F4.04	4001	F4.05	2705C
F4.03	4000	F5.03	2088	F5.04	2332
F4.06	2070	F5.06	2329	F5.07	2082
F5.05	2328	F9.01	2368	F9.01	2377
F9.01	2387	F9.02	2227	F9.03	1538

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
F9.04	1539	F9.05	1537	F9.06	2700A
F9.07	2701B	F9.08	2700C	F9.09	2705B
F9.10	2700B	F9.12	2714B	F9.13	2703A
F14.01	4140	F14.02	2703B	F15.04	2456
F15.05	2457	F15.07	2007A	F16.01	4102
F18.01	4357B	F9.01	2367	L1.03	2410
L1.01	2405	L1.02	2407	S10.01	5807
L2.03	7090	L2.03	7083	S10.01	5815
S10.01	5809	S10.01	5814	W.12	888
S10.03	5916	S10.04	5919	W.21	940
W.21	941				

2. Furnaces:

(C2.08) Struthers-Wells, Corp., Model 6CV 15-6, C2-DTG Vaporizer
5.93 mmBtu/hr (Natural Gas fired only)
Applicable Regulation: 401 KAR 61:015

(FIN.01) 3201 Eclipse Vaporizer, 4000MVDOWZB-G-PRO, FIA Dowtherm Vaporizer
11.43 mmBtu/hr (Natural Gas fired only)
Applicable Regulation: 401 KAR 59:015

(L2.01) 2211 Horizontal Syltherm Heater
4.0 mmBtu/hr (Natural Gas fired only)
Applicable Regulation: 401 KAR 59:015

3. A-1 Process Area:

(A1.04 & A1.08) A-1 Catalyst Hoppers - 1082, 1087
Vented directly to the atmosphere
Applicable Regulation - 401 KAR 59:010

(A1.02) A-1 Silicon / Sand Hopper
Applicable Regulation - 401 KAR 59:010

(A1.03 & A1.06) A-1 Copper Hopper - 1084, 1101
Applicable Regulation - 401 KAR 59:010

(A1.07) Dowtherm G Vent Condenser
Applicable Regulation - None

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

4. A-2 Process Area:
   (A2.02) A-2 Silicon / Sand Hopper
   Applicable Regulation - 401 KAR 59:010

   (A2.03) A-2 Copper Hopper - 3508
   Applicable Regulation - 401 KAR 59:010

   (A2.04) A-2 Catalyst Hopper: 3516
   Vented directly to the atmosphere
   Applicable Regulation - 401 KAR 59:010

5. A-10 Process Area:
   (A10.02 & A10.05) A-10 Silicon / Sand Hopper
   Applicable Regulation - 401 KAR 59:010

   (A10.04 & A10.07) A-10 Catalyst Hoppers: 5118, 5218
   Applicable Regulation - 401 KAR 59:010

   (A10.03 & A10.06) A-10 Copper Hoppers: 5120, 5220
   Applicable Regulation - 401 KAR 59:010

6. B-2/B-3 Process Area:
   (B2.02) B-2/B-3 Vac-U-Max Loader (5394)
   Applicable Regulation - 401 KAR 59:010

7. B-10 Process Area:
   (B10.02) B-10 CCR Vac-U-Max Loader (5394)
   Applicable Regulation - 401 KAR 59:010

   (B10.06) B-10 Me CCR Vac-U-Max Loader
   Applicable Regulation - 401 KAR 59:010

8. B-20 Process Area:
   (B20.02) B-20 CCR Vac-U-Max Loader (5394)
   Applicable Regulation - 401 KAR 59:010

8a. B-30 Process Area:
   (B30.02) B-30 CCR Vac-U-Max Loader (5394)
   Applicable Regulation - 401 KAR 59:010

9. R-10 Process Area:
   (R10.02) R-10 Rearranger Vac-U-Max Loader (5286)
   Applicable Regulation - 401 KAR 59:010

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

10. C-2 Process Area:
    (C2.05) Dowtherm G Vent Condenser
    Applicable Regulation - None

11. C-3 Process Area:
    (C3.04) 3214 Process Vessel, 2700 gallons
    Applicable Regulation - None

12. Finishing Area:
    (FIN.02) Finishing Dust Collection System Baghouse (2122):
    Applicable Regulation - 401 KAR 59:010

13. L-1 Process Area:
    (L1.04) 009-2211 MIS Dust Collector
    Applicable Regulation - 401 KAR 59:010

14. G-2 and G-10 Process Areas:
    (G2.01) G-2 Vacuum Pump, 3344
    Applicable Regulation - 401 KAR 59:010

    (G2.02) G-2 Silicon Lump Bin (3305)
    Applicable Regulation - None

    (G2.03) G-2 Silicon Lump Bin (3306)
    Applicable Regulation - 401 KAR 59:010

    (G2.04) G-2 Grinder
    Applicable Regulation - 401 KAR 59:010

    (G2.05 & G2.06) G-2 Ground Silicon Bin
    Applicable Regulation - 401 KAR 59:010

    (G2.07) G-2 Sand Bin:
    Applicable Regulation - 401 KAR 59:010

    (G10.01) G-10 Vacuum Pump, 5024
    Applicable Regulation - 401 KAR 59:010

    (G10.02) G-10 Silicon Lump Bins (5003, 5004)
    Applicable Regulation - 401 KAR 59:010

    (G10.03) G-10 Sand Bin
    Applicable Regulation - 401 KAR 59:010

    (G10.04) G-10 Grinder:
    Applicable Regulation - 401 KAR 59:010

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

14. G-2 and G-10 Process Areas: (continued)

(G10.05 & G10.06) G-10 Ground Silicon Bins
Applicable Regulation - 401 KAR 59:010

15. Miscellaneous Sources:

(SHOP.01) Olcott Parts Washer (Model GOC 3860): 15 HP Pump
Roof Ventilator
Applicable Regulation - None

16. S-10 and F-9 Process Areas:

(S10.01) S-10 Splitter System Vent: Equipped with Condenser 5826
Applicable Regulation - None

(S10.02) S-10 Materials Loader:
Applicable Regulation - 40 KAR 59:010

(F9.01) F-9 Splitter System Vent: Equipped with Condenser 2386
Applicable Regulation - None

17. P-10 Process Area:

(P10.02) P-10 Adsorbent Loading and Unloading:
Applicable Regulation - 40 KAR 59:010

18. Wastewater Quench and Filter Press Processes:

(W.11) 802 Lime Silo:
Vented through bagfilter
Applicable Regulation - 401 KAR 59:010

(W.17) P1-1003 Vacuum Pump: Seal Oil Evaporation
Applicable Regulation - None

(W.18) 1002 Process Tank, 1000 gallons: Hydraulic Solvent Storage
Applicable Regulation - None

(W.20) 869 Lime Slaker Roof Vent
Applicable Regulation - 401 KAR 59:010

(W.26) 1609 Clay Hopper, Baghouse (Insignificant activity)

19. Miscellaneous:

(--) Pressurized Storage Vessels containing volatile organic liquids designed to operate in excess of 204.9 kPa with no emissions to the ambient air
Applicable Regulation - None

(--) Natural Draft Cooling Towers not regulated by NESHAP or Early Reductions and associated chemical storage tanks
Applicable Regulation - 401 KAR 63:010

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

19. Miscellaneous: (continued)

(--) Non-Vapor Balanced Silicone Fluids Loading Operations
Applicable Regulation - None

(--) Solids Settling Basins (Waste Treatment)
Applicable Regulation - 401 KAR 63:010

(--) Emergency Generators & Emergency Fire Water Diesel Pumps
Applicable Regulation - 401 KAR 59:015

(--) Fugitive Dust from roadways, landfill and high traffic areas within the plant
Applicable Regulation - 401 KAR 63:010

(--) R & D Laboratory Hoods
Applicable Regulation - None

(--) QA and Analytical Laboratory Hoods
Applicable Regulation - None

(--) Vessels storing lubricating oils, hydraulic oils, machining fluids and machining oils
Applicable Regulation - None

(--) Combustion source flame safety purging on startup
Applicable Regulation - None

(--) Heat exchanger equipment steam cleaning area
Applicable Regulation - None

(--) Operations using aqueous solutions containing less than 1% volatile organic compounds excluding HAPs and not subject to Early Reductions
Applicable Regulation - None

(--) Replacement and repair of bags and filters in air filtration equipment
Applicable Regulation - 401 KAR 63:010

(--) Activities associated with the collection/disposal of spilled materials and residues and not subject to Early Reductions
Applicable Regulation - None

(--) Degreasing operations that do not exceed 145 gallons per year and cold cleaners that are not subject to Early Reductions
Applicable Regulation - None

(--) Equipment in support of manufacturing activities that do not result in HAP emissions such as brazing, soldering, welding, cutting equipment
Applicable Regulation - None

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. $PM/PM_{10,}$ $SO_{2,}$ $NO_{x,}$ CO, VOC, Chlorine, 2,2,4-trimethylpentane, HCl, MeCl, MeOH emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
   g. The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

Division for Air Quality
Florence Regional Office
8020 Veterans Memorial Dr., Suite 110
Florence, KY 41042

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 Section 3(1)(b) and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
      (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
      (2) The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
      (4) New requirements become applicable to a source subject to the Acid Rain Program.

      Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

   d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020 Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens. [Section 1a-15-b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of a permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in the permit and
(2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, in accordance with the terms and conditions of this permit.

a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   (1) The date when construction commenced.
   (2) The date of start-up of the affected facilities listed in this permit.
   (3) The date when the maximum production rate specified in the permit application was achieved.

c. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

d. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.

f. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

SECTION G - GENERAL PROVISIONS (CONTINUED)

5. Testing Requirements

   a. Pursuant to 401 KAR 50:045 Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

   b. Pursuant to 401 KAR 50:045 Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

   c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

   a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

   b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

7. Emergency Provisions

   a. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
      (1) An emergency occurred and the permittee can identify the cause of the emergency;

SECTION G - GENERAL PROVISIONS (CONTINUED)

(2) The permitted facility was at the time being properly operated;
(3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
(4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
(5) This requirement does not relieve the source of other local, state or federal notification requirements.

b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

8. Ozone Depleting Substances

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
(1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
(2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
(3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
(5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION G - GENERAL PROVISIONS (CONTINUED)

9. Risk Management Provisions

   a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

      RMP Reporting Center
      P.O. Box 1515
      Lanham-Seabrook, MD 20703-1515.

   b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

Not applicable.

SECTION I - COMPLIANCE SCHEDULE

None

SECTION J - ACID RAIN

Not applicable.

SECTION K – NOx BUDGET

Not applicable.